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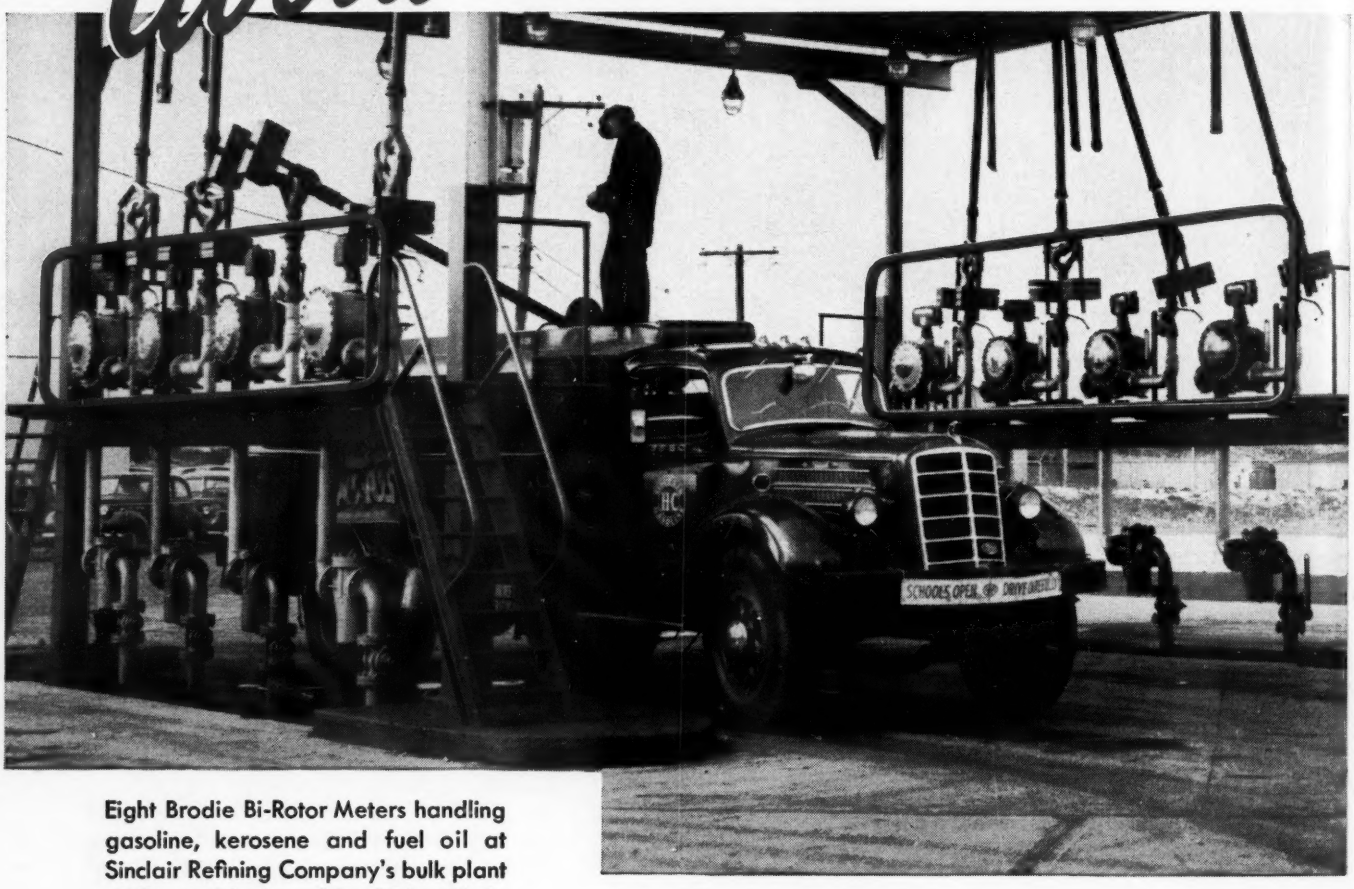
fueloil & oil heat

Avoid EQUIPMENT TIE-UPS



Eight Brodie Bi-Rotor Meters handling gasoline, kerosene and fuel oil at Sinclair Refining Company's bulk plant at Oceanside, Long Island, New York.

WITH BRODIE *BiRotor* METERS

There's never any question of equipment tie-ups or delays on loading racks equipped with Brodie Bi-Rotor Meters. With welded all-steel housing, Brodie Bi-Rotor Meters are built to withstand shocks and vibrational strains. Their sturdy construction greatly increases resistance to damage and minimizes any chance of costly leaks and losses. Providing greatest accessibility, Brodie Bi-Rotor Meters with readily interchangeable measuring units can be quickly and easily inspected or cleaned, without disturbing existing line connections. Precision dry adjustment can be made in exact increments to within 1/20 of 1%—while the meter is under pressure—and with no loss of liquid. Investigate Brodie Bi-Rotor Meters today. Write for full details.

BRODIE ALL-STEEL Bi-Rotor TRUE-ROTARY METERS

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FEBRUARY *fueloil & oil heat* 1951

VOLUME 10 NUMBER 2

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APPLICATION FOR SECOND CLASS ENTRY PENDING AT BALTIMORE, MD.

LEOD D. BECKER, *Chairman, Board of Directors*

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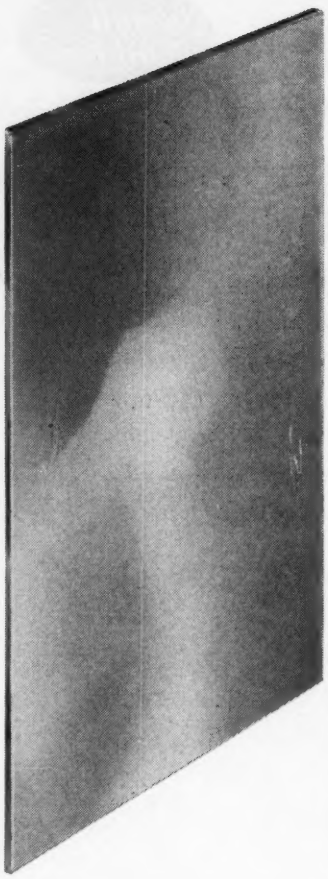
Among other things:

The lead feature this month is one of the best appraisals of natural gas competition we have ever had the good fortune to run across. The author, D. W. Goldthorp, is well known to men who were in the industry before the war . . . for a number of years he had been managing editor of FUELOIL JOURNAL, before its merger with OIL HEAT to form the present publication. During the war he went with WPB, then to OPA's fuel rationing setup, and from there to Socony-Vacuum, where he now heads fueloil promotion.

The Heating Show at Philadelphia accounts for two feature stories, one on the meetings and another on new products that were shown. Everyone said it was a splendid exposition, although we had to share honors with gas as a fuel in the exhibit spaces. It will be different at Chicago in April.

It's contract season just around the corner for service departments, so a special story by Bert Dunphy looks into the coverage included in contracts by several big dealers.

Sheared to Size for Your COMBUSTION CHAMBERS!



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Give your combustion chambers all four operating advantages

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Plants: Chicago, Illinois • New Castle, Indiana • Kalamazoo, Michigan

Names in the News

Del Wellcome has been appointed sales representative for Mor-Sun Furnace Div., Morrison Steel Products, Inc., Buffalo, N. Y., for the metropolitan Chicago territory. He has been in the heating and air conditioning business since 1936 when he joined the sales department of Minneapolis-Honeywell, later becoming sales engineer for E. G. Langhammer Co. and district manager for Askania Regulator Co. In 1947 he joined Sampsel Time Control Co. as sales manager and most recently has been a manufacturers' representative.

Henry Wollworth was elected president and treasurer, Sid Harvey of N. J., Inc., Newark, N. J., effective January 1. He succeeds M. P. Bernard, who has found it necessary to resign to devote his full time to the management of Sid Harvey of Mass., Inc., Boston, of which he is president. Previously Mr. Bernard had divided his time between both companies, and will continue as director and vice-president of the New Jersey organization. Both concerns are associated with Sid Harvey, Inc., Valley Steam, N. Y. Mr. Wollworth has been with Sid Harvey since 1938 and was in charge of the repair department before accepting the position of general manager of the New Jersey affiliate in 1949.

Gerald F. Deer, who has taken over the St. Louis area for U. S. Machine Corp., Lebanon, Ind., is one of four district sales managers recently added. Others are *Harold B. R. Larson,* who

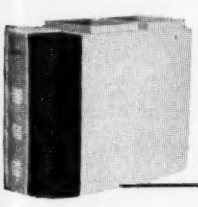
Here's why you make more money with a Fluid Heat Franchise

You get a Big, Complete Line ... for More Sales Advantages!

Famous Fluid Heat Wall Flame Rotary Burner. Two models with firing rates from ½ to 4½ gallons per hour.

Famous Fluid Heat Boiler Burner Units. Six models rated from 300 to 1090 sq. ft. of standing steam.

Famous Fluid Heat Pressure Burners. Four models with firing rates from 7/10 to 12 gallons per hour.



Famous Fluid Heat Winter Air Conditioning Furnaces. Seven models from 70,000 to 200,000 B.T.U. per hour.

You get a Fair, Square Deal from an Old, Established Manufacturer!

When you take advantage of a Fluid Heat Franchise, you're backed by a manufacturer who's been designing and building oil heating equipment for 29 years! You get full cooperation in merchandising and selling from capable and trained field representatives . . . and every product is backed to the hilt to assure you complete customer satisfaction!

Dealers everywhere prefer Fluid Heat!

Want to know why? Then just read this: "Fluid Heat gives me a complete line of Oil Burners that are easy to install and seldom need servicing . . . in fact you need only a screwdriver to accurately set the adjustment on Fluid Heat's exclusive air-regulating 'Fuel Saver' control. Non-coking stainless steel nozzles, and heavy-duty motors are additional features that add up to long, trouble-free life. You bet I value my Fluid Heat Franchise!"

fluid heat
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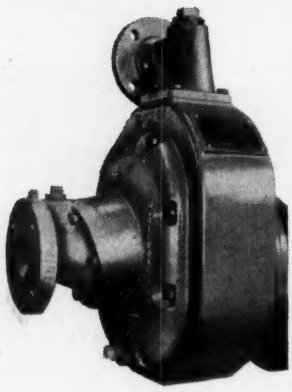
Gentlemen: Send me Details on a Fluid Heat Dealer Franchise.

Name..... Firm.....

Address.....

City..... Zone..... State.....

With Today's MARGINS a Man Has to Keep Costs Down!



. . . That's exactly why more marketers, large and small, are installing Marlow pumps in both plants and trucks. With more new features and advantages, Marlow has given the petroleum industry a new concept of *pumping* and of *pumping costs.*

PLANTS Oil Associates, Inc. of Amityville, N. Y. is a typical retail fuel oil marketer using Marlows. Rugged, reliable Marlows are always accurate; require practically no maintenance.

TRUCKS Marlow truck pumps are a guarantee of fast delivery and accurate metering. Shutdowns and layups are almost non-existent.

USE THIS COUPON

As manufacturer of the world's largest line of petroleum marketing pumps, Marlow can help you. Write without obligation.

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☐ Please have a representative call

Name .....

Company .....

Street .....

City ..... State .....

has been assigned all of South Dakota and part of southern Minnesota; *Nolen DeLap,* now serving in Arkansas and parts of Tennessee, Kentucky and Missouri and *Kenneth F. Freeman,* who is covering all of Oklahoma and Kansas and part of Missouri. All spent two weeks at the factory for briefing in product and sales procedures before taking over their territories just before Christmas.

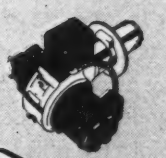
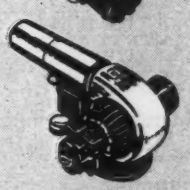
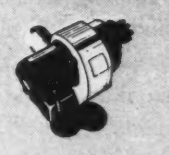
S. T. Mackenzie has been appointed to a newly-created post of sales manager for Babcock & Wilcox Co., New York 6, N. Y. Mr. Mackenzie, who had been head of the company's Philadelphia office, will make his headquarters in New York. *R. W. Buntin* succeeds him as district sales manager in Philadelphia.

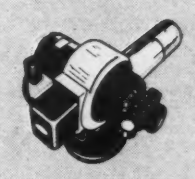
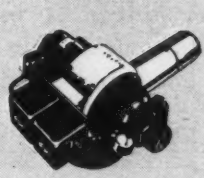
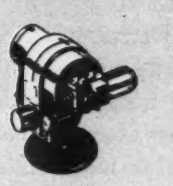
W. J. Reed has become manager of the Maryland district for The Autocar Co., Ardmore, Pa. Mr. Reed, who has been on the sales staff of the branch for the past five years, will make his headquarters in Baltimore and succeeds J. Martin McHale, who resigned because of illness.

W. A. Matheson has been named director of dealer relations of the recently organized American Bildrok Co., Chicago, Ill., manufacturers of a new type of building material. It is a lightweight aggregate of minerals and Portland cement as a binder, made in a variety of insulating, acoustical and structural building panels for residential and commercial use. Mr. Matheson, long associated with the oilheating industry, moved up progressively through top sales positions and became president of Williams Oil-O-Matic Htg. Corp. in 1944. When it merged with Eureka Vacuum Cleaner Co., he was executive vice-president of the combined corporation for several years and is still on its board of directors. He was twice president of Oil-Heat Institute of America and also wrote "The Selling Man," a book on specialty selling.

Get Ready for 1951 with the Big Profit Line of Better Oil Burners

Models from 0.7 to 25 g.p.h.

SUN-RAY IS WAY AHEAD IN DESIGN PERFORMANCE • SALES

The Sun-Ray Series "S" Burner—a leader among quality oil burners—features a specially designed housing for the famous "Shell" Patented Combustion Head, Sun-Ray Carburetion and Automatic Electric Oil Brake, all combined to give up to 36% in fuel savings, higher CO_2, higher flame and lower stack temperatures and just about the best ever in over-all combustion efficiency and clean, quiet operation.

It pays to sell the burner line that's complete—that gives you plenty of range to select the right burner for each installation, large or small.

It pays to sell the Sun-Ray because it's a quality line, built by one of the leading and oldest burner manufacturers. Sun-Ray burners are endorsed and specified by architects, engineers, builders, realty managers, federal, state and city departments everywhere. Thousands upon thousands of these burners are installed every year in homes, apartment houses, stores, factories, schools, churches, institutions, etc.

It pays to sell Sun-Ray because Sun-Ray sales literature, newspaper mats, window displays and signs make Sun-Ray known to your customers as an outstanding name for economical heating. Sun-Ray factory engineering and sales cooperation are outstanding.

For quicker service — Sun-Ray Burners are factory stocked in Buffalo, Chicago, St. Louis, Detroit and Portland, Ore. They are also warehoused by leading distributors throughout the country.

Investigate the Sun-Ray line from every angle — design, specifications, installation, service, performance, price. You'll discover—as have many others—that it pays off handsomely to enjoy a Sun-Ray sales franchise.

Judge the Burner you sell on . . .

- DESIGN
- PERFORMANCE
- REPUTATION
- TYPES & SIZES
- PRICE

and you'll settle on SUN-RAY

Inquiries invited from Boiler and Furnace Manufacturers

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FAMOUS THE WORLD OVER FOR QUALITY AND ECONOMY

SUN-RAY BURNER MANUFACTURING CORP.

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Editorial Leaks

At the quarterly meeting of the board of directors of Oil-Heat Institute of America it was voted not to raise the dues at this time, even though operating expenses have risen sharply.

The members of the board reasoned that in a period of national emergency a central industry rallying point is more necessary than ever. It is time, they felt, to make a special effort to get into the fold a considerable number of industry men and firms that are not yet members.

Increased membership, at present dues, is more desirable than larger contributions from fewer companies. The period ahead is clearly one in which group action for the industry can get some things done that would be too burdensome to undertake individually.

In this issue is an article setting forth the Institute's activities on manpower . . . its presentation to the Government authorities. The clear exposition of the case for special consideration of servicemen will also be valuable to individual dealers with their local boards. These jobs the Institute can do well.

❖

A question has been raised in oilheating circles as to whether the industry should spend any significant amounts to promote oilheating in cities where gas is considerably cheaper as a fuel.

Detroit was cited as an example of a city where gas got the lion's share of installations for several months; then when gas limits had been reached and no more jobs could be put in, very few families bought oilburners. They preferred to wait until gas was again available. To the extent that this was true in Detroit, it could have been avoided to a large extent if a real promotional campaign for oilheating had been under way.

Our reason for thinking this is that it happened in St. Louis. Gas in St. Louis is cheap when you can get the installations. But last August the gas utility cut off taking new connections. Oilheating, which had been doing only a fair business, immediately took a spurt. The year ended with a good crop of new oilburner users.

The difference between St. Louis and Detroit . . . St. Louis had persevered in oilheating promotion through its local association. People knew well the reasons why it was good.

❖

At a Federal Power Commission hearing in January, N. C. McGowen, president of United Gas Pipeline Co., explained that competition to buy gas in the Gulf Coast area is getting keener each year.

He stated that prior to the tapping of the area by the new long distance lines starting in 1944 gas producers were crying for markets. Now it is necessary to seek them out and engage in stiff bargaining to buy gas, he went on to say.

Industrial gas consumers in the Gulf Coast area are squawking about exporting larger amounts of gas; competition from the long lines has raised their costs for gas.

Then there was a member of FPC, Mr. Harrington Wimberly, who spoke before the Interstate Oil Compact Commission last month. He suggested the possibility that natural gas reserves may have been over-committed to the large lines. He concluded, "It may be that those who are demanding more and larger markets may have to do some explaining to home town customers in five or ten years from now."

❖

An interesting letter to the editor from a fueloil marketer in upstate New York could have been written by a great many other men in the business. It points up, with benefit of figures, the present ratio of margins to selling price as compared to prewar experiences. This is the letter:

"Our fueloil margin in 1939 was 2.075¢ with a retail price of 7.7¢, or 36.8%. Now it is 2.7¢ with a retail price of 13.7¢, or 24.5%. The oil price in that 11 years has increased 78%; our margin has increased 30%; our operating expenses are up nearly 100% . . . where do we get off?"

If that were all there were to the story, certainly most fueloil distributors would have long since quit. Naturally we would like to see higher margins, but we don't think they will be much higher on the average as long as the oil suppliers can get the job done and the public reasonably well served.

The reason fueloil men have stayed in business in spite of the unfavorable economic comparisons is that there are so many more customers being served by the average oil man today. Some figures from the January issues of 1940 and 1951 bring this to light. Today there are 5,146,000 central heating oil users; then there were 2,135,000. The number of fueloil distributors has not increased in anything like that proportion. In 1940 the average fueloil truck served 125 customers; now they serve 313 . . . trucks today average much larger in size.

In 1940 the average fueloil marketer delivered 40 gallons per truck mile of operation; today he delivers 52 gallons. His average truck in 1940 was driven 8,400 miles a year; now it goes 11,200. In 1940 the average truck delivered 336,000 gallons; in 1950 it delivered 582,000 gallons.

Those are some of the reasons why retail fueloil men are still around. Certainly 1939 margin ratios would be much easier to live with today than what we have, but calling a spade a spade, it's only economic pressure that can raise them. That pressure is not sufficiently evident today, when the suppliers are able to get marketers to distribute all of the product they make.

❖

More than 70% of the 2,000 companies supplying goods and services to the B. F. Goodrich Co. last year are so-called "small-business," according to a company survey. They were classified as small because they had fewer than 500 employees or sold less than five million dollars a year.

By that yardstick the vast majority of the companies in our industry are small. This may be a help as Washington activities progress, for the politicians profess to love small business.

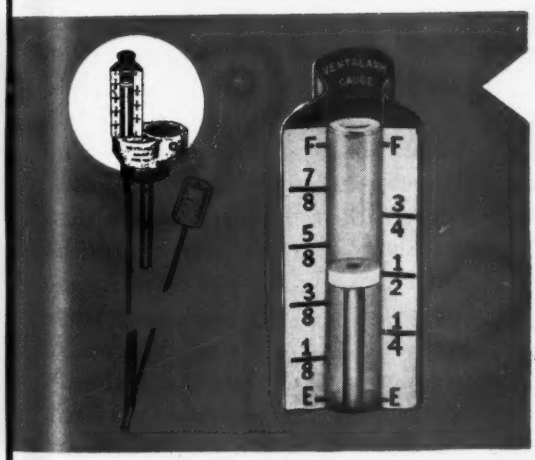
SCULLY FUEL OIL DELIVERY AIDS

for conservation of fuel, time, equipment and man-power

VENTALARM®

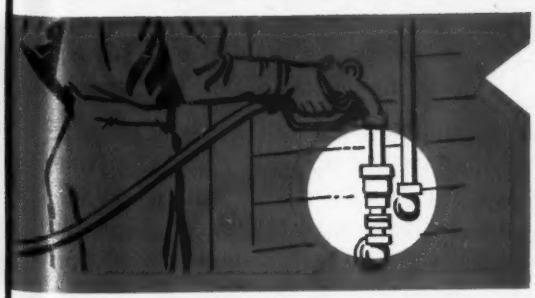
WHISTLING TANK FILL SIGNAL

For installation on new and old fuel oil tanks. Driver just fills 'til the whistle stops. Prevents spills. Eliminates need to enter home. Simplifies degree-day work. Saves five minutes per drop. Decreases delivery costs by 15% to 30%. Models for all vent pipe sizes on both new and old tanks.



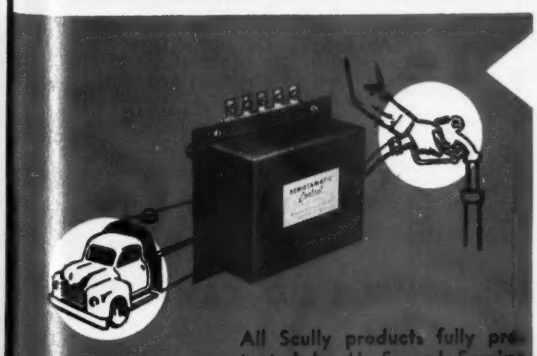
VENTALARM® GAUGE

All the benefits of the whistling tank fill signal combined with a tank gauge of super visibility. Read easily even 10 ft. away. Saves installation time and cost. No reducing bushing needed. "Snap-by" float arm adjustable for permanent operation in either direction. You install <u>one</u> item instead of <u>three</u>.



FASFILL® CONNECTOR

Portable, hand-tight connection for gun and fill pipes of all sizes. Allows top-speed fills without a drip or blowback. Easy hand turn puts it in place. No tools involved. No buildups necessary. Diaphragm head holds nozzle.



REMOTAMATIC CONTROL

T. M. REG.

Remote control which permits starting and stopping the truck motor and delivery pump by opening and closing the hose nozzle while at the fill pipe. Eliminates unnecessary motor operation. Cuts gas consumption. Control is in small metal box easily installed in cab or under engine hood of new or old trucks.

See your regular Supply House or write for information to . . .

SCULLY SIGNAL CO.
76 First St., Cambridge 41, Mass.

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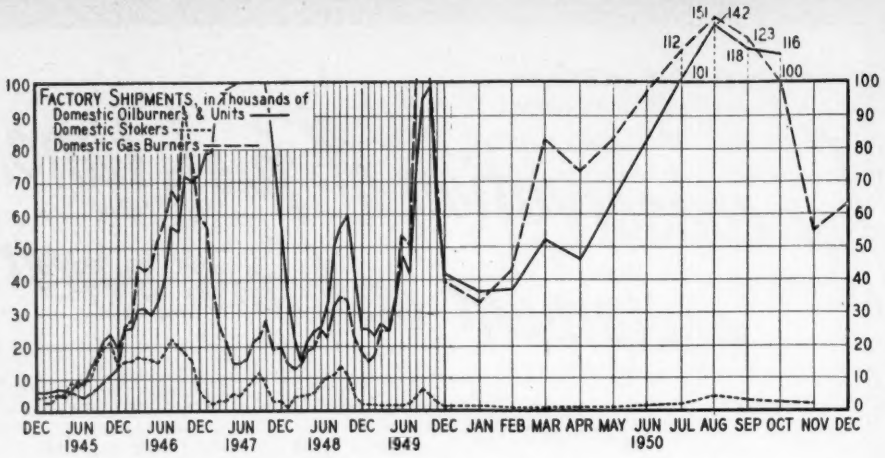
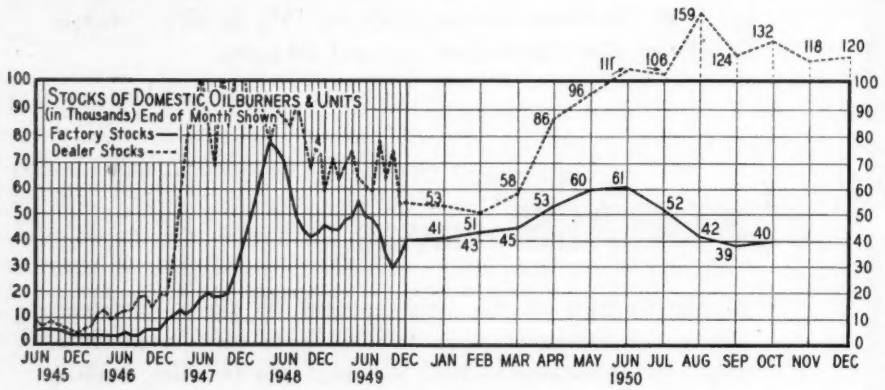
Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario


FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1945 1946 1947 1948 1949 1950

Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than the 152 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	NOVEMBER			ELEVEN MONTHS		
	1950	*1949*	*Percent Change*	*1950*	*1949*	*Percent Change*
Conversion	47,577	44,328	+ 7.3	624,484	416,173	+ 50.0
Boiler units	6,064	6,104	— 0.6	84,066	50,650	+ 65.9
Furnace units	16,594	10,530	+ 57.6	157,752	89,622	+ 76.0
All Domestic	70,235	60,962	+ 15.2	866,302	556,445	+ 55.6
Commercial	3,747	2,554	+ 46.7	32,173	23,524	+ 36.7
Total	73,982	63,516	+ 16.5	898,475	579,969	+ 54.9

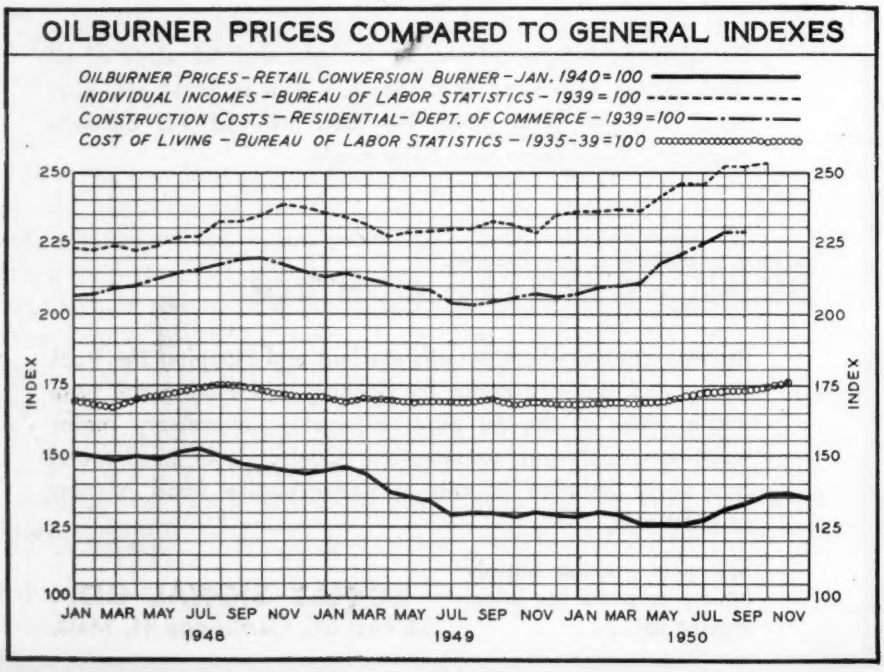

STOCKS OF DOMESTIC OILBURNERS & UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1945 1946 1947 1948 1949 1950

December Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
December Aver.	$321	$663	$606
November Aver.	319	661	610

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
December	137.9	Six months ago	124.4	December	135.3	Six months ago	125.3
November	134.0	Year ago	128.2	November	136.3	Year ago	129.4


OILBURNER PRICES COMPARED TO GENERAL INDEXES
OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
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JAN MAR MAY JUL SEP NOV JAN MAR MAY JUL SEP NOV JAN MAR MAY JUL SEP NOV
1948 1949 1950

Oilheating Trends

ESTIMATED INSTALLATIONS of domestic oilburners and units in December were 39,128, or 19% above the corresponding month of last year. However, this showed a very sharp drop from the 83,964 installed in November.

The December installations were divided: New homes 15,025; Replacements of old oilburners 5,073; Conversions from other fuels 19,030. For the total twelve months the indicated installations were 786,822. This figure of course is at variance with the estimate published in the January issue of FUELOIL & OIL HEAT in which the year's total based on the big year end market study was 817,702. The final estimate, to appear in the March issue will take into account complete factory shipments, dealer stock levels, exports, and other minor factors. At that time there will also be made a state by state summary as in former years.

Based on the 1950 monthly market sampling studies the installation total was divided: New homes 217,636; Replacements of old oilburners 88,508; Conversions from other fuels 480,678. However, the slightly different ratios between these three applications that was shown in the January FUELOIL & OIL HEAT is probably more nearly accurate since it was based on a large study made at one time. We would recommend that when the final estimate for the year is published in March you take the January issue percentages on kinds of installations and apply those, revising your monthly figures back through the year to conform.

BURNER STOCK: Domestic oilburners and units in dealer stocks on January 1 were approximately 119,509 compared with 117,960 on December 1 and compared with only 54,478 on January 1, 1950. Thus we see that during the year there was a rise in dealer stocks of approximately 65,031. Factory stocks on October 31, the latest available information were 39,506.

TANK STOCKS: Oilheating dealers had in stock on January 1 approximately 76,130 customer tanks, compared with 75,397 on December 1. These stocks were divided by sizes as

Quiet MAY
Boiler-Burner
Unit

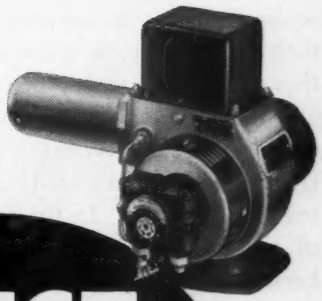
To instill confidence ...install

QUIET MAY

When you install Quiet MAY oil heating equipment, you instill the kind of confidence that keeps building your business . . . year after year.

For Quiet MAY is a respected name everywhere. On a conversion oil burner . . . on a boiler-burner unit . . . on a warm air furnace . . . it inspires your customer's confidence in the soundness of his investment. Quiet MAY's performance, end-product of 26 years of engineering advancement, unfailingly justifies that trust . . . constantly broadening public confidence in you.

Hundreds of Quiet MAY dealers have sales records to prove the point. Why not prove it to yourself?



Quiet MAY
Conversion
Burner

QUIET MAY OIL BURNER

OHI

MAY OIL BURNER division of Gerotor May Corp., Baltimore 3, Maryland

fueloil & oil heat

follows: 220-275 gallon 67,028; 550-675 gallon 6,789; 1,000 and larger 2,313. For the fourth month in a row the average price paid by dealers for the 275 gallon size was $44. The market seems to have leveled off at this point and the dealers seem to be getting about all the tanks they need. It was significant that in a later question about what material shortages were holding up completion of present orders only 1% of dealers mentioned tanks.

DETAIL OF REPLACEMENT SALES: For the first time in several years a check was made this month to learn what kind of equipment is being sold to replace obsolete oilburners. Based on the experience of the reporting group during 1950, 55% of the replacements were conversion burners only, 23% also included a new boiler and 22% also included a new furnace. The dealers were not asked to distinguish between factory boiler burner units and the separate boiler in which the dealer placed his burner. The same was true with furnaces. The significant point is that nearly half of all replacement sales involved a complete heating unit.

On 85% of the replacement sales new controls were supplied throughout; on 9% of such deals new tanks were supplied.

There has been a lot of conversation about the age of oilburners that are replaced. Some manufacturers urge their dealers to replace any oilburner they can, on the theory that the new one will be more efficient. Some of these quick turnovers do occur but by far the largest number of replaced burners are over 10 years old. In the experience of the reporting group 6% of the burners they replaced were under 5 years old; 17% were between 5 and 10 years old; 38% were between 10 and 15 years old; 39% were over 15 years old. The median age of all burners replaced by the group was 14 years.

About one-seventh of the old burners taken out are cleaned up and tuned up to be sold again. Naturally the others are also sold either as scrap or to some junk dealer who may in turn put them back to work. The point however is that one-seventh of the old burners are installed in other homes by the dealer who replaced them. Asked what they get for one of these old burners polished up and resold with a 275 gallon basement tank, the average price was $225.

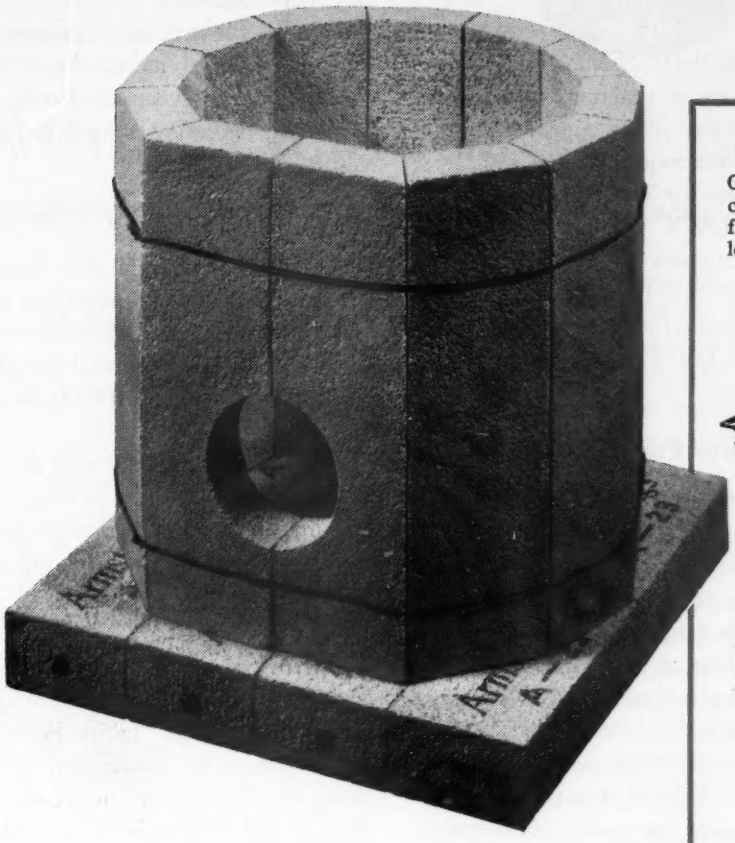
INSTALLATION MATERIALS: Among the reporting group of dealers three out of four say that they are building material stocks as large as they can get or can afford to carry. This situation seems to be pretty well under control. Asked how many jobs they were unable to complete because they lack some item of installation material only 1 dealer in 8 is being held back on any

(*Please turn to page* 109)

Oilburner* and Building Permits

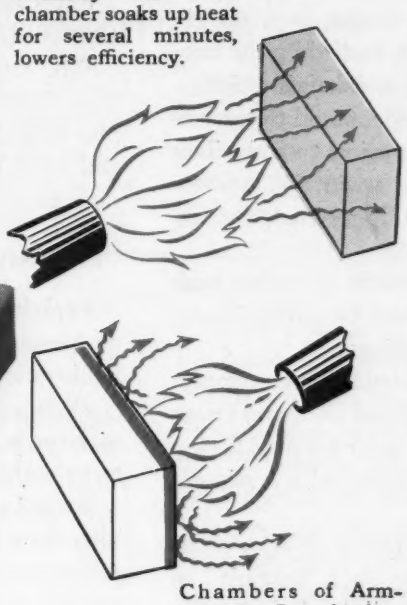
OILBURNERS					DWELLINGS			
December		12 MONTHS			December		12 MONTHS	
1950	1949	1950	1949		1950	1949	1950	1949
46	100	1094	698	Albany, N. Y.	..	..	..	..
196	547	4875	6173	Baltimore, Md.	474	183	2661	2885
..	..	..	..	Binghampton, N. Y.	12	3	150	106
..	..	..	..	Bloomfield, N. J.	151	2	342	81
..	1213	..	6344	Boston, Mass.	14	23	319	348
102	92	1398	1065	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	..	27	..	431
5	..	34	..	Columbus, Ohio	..	..	..	..
..	..	..	..	Des Moines, Iowa	23	44	1638	1213
290	92	2282	6011	Detroit, Mich.	403	895	11981	12064
101	61	878	597	Elizabeth, N. J.	4	2	63	54
47	35	530	379	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	36	30	406	240
..	..	..	..	Hackensack, N. J.	22	2	208	56
129	101	1535	1066	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
9	23	552	340	Irvington, N. J.	4	0	51	25
..	..	..	..	Lynn, Mass.	5	8	171	204
..	114	..	448	Meriden, Conn.	..	..	..	..
120	265	3033	3769	Milwaukee, Wisc.	172	209	3611	2324
81	122	1056	1216	Minneapolis, Minn.	39	155	2057	1898
21	10	362	261	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	41	..	68	..
20	27	503	447	Mt. Vernon, N. Y.	..	..	..	..
..	96	..	1782	Newark, N. J.	..	..	..	..
51	34	947	689	New Bedford, Mass.	..	..	..	..
57	62	697	763	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
46	14	423	322	New Rochelle, N. Y.	3	12	198	60
2790	2592	35339	27364	New York City (total)	..	..	..	..
2096	1983	28124	21146	Brooklyn-Queens	..	..	..	..
694	609	7215	6218	Manhattan, Bronx, Rchd	..	..	..	..
98	147	1399	1947	Norfolk, Va.	..	85	..	841
..	..	..	..	Oakland, Calif.	..	..	..	..
87	53	1243	1628	Omaha, Nebr.	27	46	1479	716
14	6	289	206	Orange, N. J.	0	2	18	9
10	17	388	318	Passaic, N. J.	..	..	..	..
29	43	1047	768	Paterson, N. J.	21	11	218	123
965	944	14101	10731	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	24	7	312	142
61	24	664	402	Portland, Me.	6	10	232	138
380	284	5998	6226	Portland, Oreg.	107	339	2490	2209
9	15	253	265	Poughkeepsie, N. Y.	..	..	..	..
..	50	..	674	Providence, R. I.	..	12	..	185
..	..	..	..	Reading, Pa.	7	3	79	65
46	108	1155	1079	Richmond, Va.	31	41	723	676
50	125	1148	2426	Roanoke, Va.	..	..	..	..
126	16	3475	281	Rochester, N. Y.	..	..	..	..
15	38	373	376	Rockville Center, N. Y.	14	6	197	114
29	79	603	812	Salem, Mass.	0	3	79	94
..	..	..	..	St. Louis, Mo.	23	43	969	598
89	114	2242	2157	St. Paul, Minn.	31	71	1640	834
76	81	674	567	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	133	153	2761	1690
..	..	..	..	Springfield, Mass.	43	71	764	562
88	69	968	575	Stamford, Conn.	..	..	..	..
..	30	..	668	Syracuse, N. Y.	26	27	591	355
..	..	..	..	Trenton, N. J.	2	2	64	70
..	..	..	..	Utica, N. Y.	1	1	175	85
108	126	2086	1426	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	98	6	551	189
23	20	410	279	White Plains, N. Y.	30	5	239	108
78	47	1143	1139	Wilmington, Dela.	6	1	256	103
167	123	3146	1629	Worcester, Mass.	..	..	..	..
106	38	1074	655	Yonkers, N. Y.	..	..	..	..
6760	6694	99383	87052	*Totals*	1988	2411	37693	30438
+1.0		+14.1		*Percent Change*	—17.5		+23.8	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.



SUCCESS SECRET

Ordinary fire brick chamber soaks up heat for several minutes, lowers efficiency.



Chambers of Armstrong's Insulating Fire Brick reflect heat back into firebox almost immediately.

Armstrong's combustion chambers

Engineered to make any burner do its best

Armstrong's Combustion Chambers promote peak performance of every burner. For one thing, these chambers get hotter in two or three minutes than heavy fire brick chambers do in 15 or 20 minutes. Because they heat up faster, CO_2 readings are higher. There is less smoke.

With these chambers, burners can be adjusted more accurately, and this means that homes can be kept comfortable with up to 15% less fuel. Because the insulating fire brick are porous, they act as an acoustical material, "soaking up" most of the burner roar.

Armstrong's Combustion Chambers are made in three types for all temperatures to 2600° F. All come in three sizes for burners ranging in capacity from one to two gallons per hour.

For furnaces requiring special fabrication, you can choose from Armstrong's complete line of six standard insulating fire brick. All these brick have low heat storage and high insulating efficiency, great strength and spalling resistance, and are easy to handle and cut.

Armstrong's Combustion Chambers and Insulating Fire Brick are available through Armstrong's distributors and oil-burner wholesalers. For information, call your supplier or write to Armstrong Cork Company, 1402 Mulberry Street, Lancaster, Penna.

ARMSTRONG'S COMBUSTION CHAMBERS

Made of Armstrong's Insulating Fire Brick

Government Influences on Fuels

by

Milburn Petty

WASHINGTON—Relief measures for fuel oil dealers caught in a margin squeeze are being studied by the Economic Stabilization Administration.

Many distributors found themselves with their buying prices up and selling prices still down when the industry was requested by ESA to hold the line as of December 18.

The general freeze on prices took the "highs" between December 19 and January 25 as ceilings.

Since the industry had been complying with ESA's special voluntary freeze on its prices, the order has not affected oil except that these price levels are now mandatory.

Orville Judd, ESA's oil price chief, has been working on a "formula" to set oil prices at all levels beginning with the price of crude oil.

This involves determining what is the "proper" relationship between crude and refinery prices, and between tank car and tank wagon prices. It may mean establishing a new price structure, area by area.

Judd has a new boss, though, which may change the situation. He is Richard L. Bowditch, Boston coal man, ESA's assistant director for transportation, fuels, services, imports, exports.

Already, there are indications that Bowditch will take an active interest in oil price controls.

Tankers To Get Attention

First action to relieve the margin squeeze likely will be ESA's setting of ceilings on tanker rates.

While east coast marketers have held the line on fuel oil prices, rates for tankers continued to climb, reaching 200% above U. S. Maritime Commission rates of World War II.

ESA is now setting up an industry advisory committee to consult with on the east coast situation. Besides rolling back rates, it may be necessary for ESA to grant some increases in fuel oil prices, too.

In determining rates for civilian oil cargoes, ESA may be guided by the rates set by the U. S. Maritime Administration for transactions in the new voluntary "pool" to supply the military's tanker requirements.

Rates set for T-2 tankers or larger (14,000 DWT and over) were the USMC rate plus 25%; for tankers between 9,000 and 14,000 DWT, USMC plus 40%; and for those between 6,000 and 9,000 DWT, there will be special rates fixed.

PAD Says Fuel Oil Supply OK

Replying to Congressman Heselton of Massachusetts, the Petroleum Administration for Defense said:

"While the supply situation at the moment is fairly tight, there appears to be nothing to cause alarm."

Several principal New England suppliers have advised PAD "that, barring unforeseen circumstances such as disruption to normal transportation apt to be caused by severe snowstorms, there appears to be no probability of anyone actually decreasing stocks to the point of being unable to supply customer's needs."

Congressman Heselton has suggested that the government re-instate the so-called conservation order of 1948 limiting the installation of oil burners in new government projects. (This order was rescinded in January, 1949, when there was plenty of oil.)

Roundtable On Fuels Planned

Chairman O'Mahoney of the Senate Interior Committee plans to hold a roundtable discussion of fuel policies late in February, with experts on oil, gas, coal and electricity participating.

This roundtable will be preliminary to formal hearings by O'Mahoney's committee which are for the purpose of developing a national policy on fuels.

As a basis for these discussion, the committee has published a 226-page monograph which O'Mahoney describes as "a compilation of known facts" about all fuels.

O'Mahoney posed these questions:

To what extent would defense needs necessitate restrictions on liquid fuel consumption?

To what extent is fuel-consuming equipment readily convertible from one fuel to another?

Is it possible to re-direct present flow of fuel supplies to meet military needs at new points of consumption?

Are the necessary transportation facilities available?

States May Fix Prices On Gas

Taking a tip from the Supreme Court, several of the producing states are now considering legislation to set minimum prices on natural gas at the wellhead, probably higher than some contracts now in force.

In time, this might compel the Federal Power Commission to allow pipeline-owned gas production to be figured in at a higher cost in fixing rates.

Seek Action In Phillips Case

Senator Wiley of Wisconsin is urging action by the FPC in the oft-postponed case against Phillips Petroleum Co. in which the commission seeks to bring the oil company under its jurisdiction and roll back its natural gas prices to certain mid-western utilities.

PAD Studies Transportation

Swamped with new applications for oil and gas pipelines, PAD has called in John Boatwright, Indiana Standard economist, to study transportation.

Idea is to find out what should come first in new transportation projects in view of material shortages.

"For example," PAD Deputy Bruce Brown explained, "we want to know if it will be necessary to build more pipelines to the East Coast."

In the last war, the "Big Inch" pipelines were built by the government to transport crude oil and products to the east coast, by-passing the submarines infesting tanker lanes. Afterwards, they were sold for gas use, with a provision that they could be reconverted to oil if national defense required it. It is now recognized that these lines are probably irrevocably committed to gas transmission.

With complaints dwindling, PAD now believes the temporary shortage of liquefied petroleum gas is "clearing up." But it may flare up again in a prolonged cold spell. Only remedy is to build more pressure tank cars as PAD has recommended.

House cleaning for natural Gas

Customer relations—often secondary or neglected—regaining Importance

by

D. W. Goldthorp*

THE INTRODUCTION of natural gas will produce a change in your market area that is more than surface deep. Riding around, you will see everything the same—streets, houses, people. Even the building of the gas utility will have the old familiar look. The change won't be physical. It will be in the minds of your customers and prospects. In automatic heating, they will be aware of a choice—oil or gas. They may have had a choice for years, but the ballyhoo that comes with natural gas will make them conscious of it. Once people realize that two systems provide the same desirable result, they start comparing; they place emphasis on points they would take for granted, were there no choice.

People have not two but many choices in automobiles, refrigerators, washing machines, television sets and kitchen ranges. They know that all automobiles operate the same, basically. So a buyer chooses a particular make for one or more relatively minor reasons—miles per gallon, body design, availability, service facilities, ease of buying—features that have little to do with getting there and back. The same is true of all home appliances. The buyer knows that all will give him what he wants, so he rests his selection of one make over others upon features that are definitely secondary to the main purpose of the unit.

This is the change that natural gas will bring when it comes to your town. People will begin to compare oilheating with gasheating, as they've never done before. They won't question the ability of an oilburner to heat a house, or of oil to burn, any more than they will question gas as a suitable fuel. They will compare relative efficiencies, dependability of fuel supplies, cost and dependability of service. Above all, they will want to know which is the more automatic. Competition is no longer your burner against another burner but your oilheating against gasheating.

*Socony-Vacuum Oil Co., New York.

Start planning now

Success against natural gas competition depends upon a switch in strategy to meet the change. And since that is something that takes thought and planning, now is none too soon to start. You can be sure that people are going to have automatic heating—(that idea has been sold)—but whether they will buy yours or the type offered by a gas utility depends upon who does the best selling job.

While thinking along these lines, it's just as well to be honest and admit that oilheating generally has never been sold, in the sense that automatic refrigerators, radios, washing machines and other home appliances have been promoted. Make any comparison you want —number of salesmen, volume of advertising, use of direct mail, number of dealers—and you'll discover that oilheating is far down the list. The reason is simply that oil in many markets has had the automatic heating field pretty much to itself. Now, that is changing. Sales activities that have been secondary or completely neglected in the past will become more important.

Gas utilities are in position to know in minute detail the marketing areas they serve. If you should try to compete against them, knowing less than they do, you may be fighting a losing battle. While you gun for two sales, the utility will pick off a dozen.

You already know a great deal about your market area because you've worked it for years, but unless you have recently collected data, set them down and studied them, the chances are you don't know all you are going to need to know. This is particularly true if your last good look at the market was cast before the start of World War II. In the U. S., since 1940:

Nearly 14,000,000 consumers have died.

Better than 1/3 of all present families have been formed.

These are the vital statistics only. Perhaps more important is the change that has come in buying attitudes, due to social changes and cheap money. More people have more money, and think less about saving it for a rainy day, than ever before. Through social security and company pensions the future seems safe to them. And everybody should have all the good things that drop off the end of assembly lines.

It's a fact that 48% of the people today have no consciousness of ever having lived during depression — they have been bred to expect only rising production, plenty of jobs, 5 day weeks and high rates of pay. Under these conditions it's easy for a family to decide to purchase now those things which add to their enjoyment of life. Sales figures show that this is just what millions of families are doing.

This is a period of fast buying. Sales go to the fast sellers. It isn't enough today just to be in business—or to have a good reputation. You've got to reach the buyer before he buys. If you don't, the gas utility will.

This is why it's so important to know your market as it is today. Not just the geographical boundaries, but what and who these boundaries confine. Your job is to sell oilheating where

it can be sold, and sell it to everybody at once. Like the gas utility is going to sell gasheating. This means working the sections where the greatest number of able-to-buy prospects live—and working those sections consistently through advertising, direct mail, and personal sales calls. It might even mean estimating the number of structures by type of fuel used, to be sure you won't spend time selling oilheating to those who already have it. You will certainly want to underscore those sections not served by gas mains, for these will be the places where oil will continue to be the only automatic heating fuel.

Your prime sections will be those with a good proportion of coalheated dwellings. The faster you get into these places with your story, the better, for experience shows that gas draws its customers away from coal, rather than oil. The fewer the coal customers, the harder it will be for gas to get started.

Try to get a line on what people in your town think about gasheating. Ask your friends. Get your employees to ask theirs. Perhaps you can talk to people who use it. They will tell you what they like about it—or don't like—and such information will come in handy when you go out to sell against gas.

A sharp eye trained on your utility is a good practice too. Its heating rates, of course, are a "must," so that you can compare the cost of heating with oil and gas. Watch its advertising and promotion material, so you will know its strong arguments and how it gets these before people. Be alert to what it is doing to increase its storage capacity and to extend its mains. And because some utilities have been known to oversell, with consequent inability to supply sufficient gas during periods of peak loads, look for signs of such a trend by your utility. Get to know how it services house heating customers—directly or through contractors—for you might find a good sales argument here. Its installation standards, past and present, and their trend up or down, deserve your attention for the same reason. In other words, gas utilities are not as infallible as some people think.

Mobilize your selling Points

The advantages of heating with oil are the same whether you compete against gas or not. But the way you present your arguments and the way you support them are quite different. Where there is no gas competition, the prospect is led to the decision that he wants automatic heating. There's a world of difference between leading him to that decision and convincing him that he wants oil rather than gas. As a matter of fact, when competing against gas, it's wise to assume that your prospects want automatic heating, and that your job is to show them why oil is the better buy. Here are some suggestions:

1. Oil is automatic — completely automatic. A burner starts and stops by itself to maintain any temperature desired. Fuel is delivered without ordering and without disturbing the occupants of the house. Through the degree-day delivery system, there need be no interruption in the supply of fuel to the burner. What could be more automatic?

2. Both oilburners and gasburners are mechanical devices that require periodic servicing for maximum dependability and efficiency. Properly attended to, both operate with few mechanical breakdowns and at practically the same efficiencies.

3. The supply of oil is dependable. Crude oil reserves in the U. S. have been rising steadily despite increased consumption. Reserves of natural gas, based on present consumption, are not much larger than those of crude oil.

4. Oil is clean. It's as clean as any fuel commonly available can be. Cleanliness in a fuel is measured by the completeness of its burning. Oil burns as completely as gas.

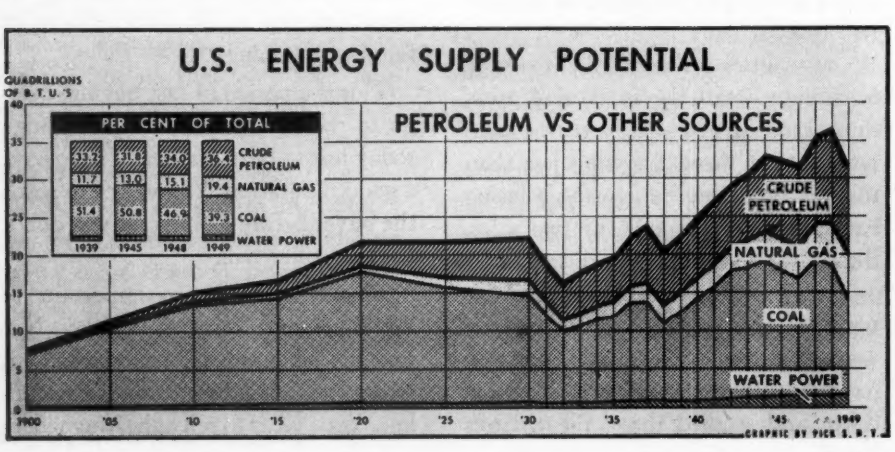
5. Oil is safe. Before it will burn, it must be heated to temperatures that are rarely encountered in a home outside the furnace or boiler. Consequently, a leak, though annoying, rarely produces a dangerous situation if attended to promptly. Liquid oil does not mix with air to form a mixture that can be exploded by a lighted match or cigarette, or by a spark from the motor of a household appliance.

6. Oil provides a fuel reserve on the premises. This isn't possible with gas. The reserve assures uninterrupted heating during emergencies that temporarily prevent truck movements. With no such reserve, a gas consumer is subject to interruptions of fuel supply any time any part of the gas main serving him is out of order. In this connection, it is of interest to point out that it's possible to store more heat units in a cubic foot when it is filled with oil than with any other fuel. As a matter of fact, a fueloil tank holds a heating reserve 1,000 times greater when filled with fueloil than if it were filled with natural gas.

7. Substitute means are available for delivering oil but not for gas. Even if all the trucks of a fueloil distributor were destroyed, he still could arrange for deliveries to his customers.

8. Oil pressure at the nozzle of a burner is determined only by the pump on the burner. Gas pressure at the burner is determined by the rate of consumption of all users. The greater the consumption, the lower the pressure. And since consumption is greatest on cold days, pressure may fail when it is most needed.

9. The rate at which oil may be delivered is completely flexible. There are no practical limitations. A record-



breaking cold spell simply means more frequent deliveries. But the rate at which gas is delivered definitely is limited by the diameter of a pipe and the pressure of the gas in it.

In many areas this list of selling points can be completed by adding a comparison of oil and gasheating costs. These comparisons frequently are extremely favorable to oil, and may continue to be for some time, even after natural gas has been introduced. But, from a merchandising point of view, campaigns based solely on the lower cost of oil are not recommended. They could easily leave the impression that because gas is more expensive, it is better. Don't forget, people *want* automatic heating, and many have the money to buy the best. Your campaign consequently should be built around the theme that oil is automatic, clean, safe, dependable and . . . costs less. In other words, it provides all the features people want at a lower cost.

Match your Competitor's Technical Skill

A burner and a supply of fuel are as necessary for automatic heating as film for a movie. But just as a strip of film is not a movie, so a burner with fuel is not automatic heating. The burner must be installed and then maintained. You know this. So does your gas utility. And you may be sure that if you give the utility a chance, it will make many sales on the strength of superior installation and service facilities.

In the East, many manufactured gas utilities long ago won prestige for themselves by maintaining exceptionally high installation standards. They knew at the start that with high rates, if they were to have any house heating customers at all, they would have to install for maximum operating efficiencies. They took pains to do just that. Similarly, they serviced their installations carefully to be sure that efficiency levels were maintained. Now they are noted for this.

Whether or not they will be able to maintain these standards when they change to natural gas and acquire customers at a faster rate is something to think about. Perhaps they will not. Even so, their present prestige will carry over for quite a while, and if they should be able to uphold previous standards, then of course it will continue. One way or the other, you'll be competing against your utility's local prestige for fine technical work.

This puts the burden upon you to match—or beat—your local utility point by point. You know that oilburners are capable of operating at efficiencies equal to those of gasburners. You also know that, through regular checkups, their efficiency levels can be maintained. It's simply a matter of establishing high standards, training your men to live up to them, and seeing that they have the instruments they will need. Many worthwhile articles have been printed on installation and service techniques. Oilburner and allied equipment manufacturers, trade schools, and oil companies conduct numerous training courses. If necessary, use these training aids, because you can't honestly say you sell automatic heating until you have a top-notch installation and service department.

How you spend your operating dollars may determine the final outcome of your battle with natural gas. Utilities are not individual business men with limited financial resources, like the dealers and distributors you've been competing against for years. They often have large funds which enable them to take financial setbacks. Indeed, by law they may be compelled to stay in business, even if their owners want to close up.

This is not all. Their overhead and operating costs are less than yours per gallon equivalent or per burner, simply because their volume is so much greater. A single utility with one overhead has all the gas business in an area, while the oil volume may be divided among 10, 50, or 100 fueloil distributors, with an equal number of duplicate overheads.

Under these circumstances, any overhead or operating wastes that you can find should be ended. You need to save all you can now to build resources, and to be ready to meet as best you can any price competition that may be in store for you should pressure to sell gas be placed on your utility.

You have sales and office overheads, and costs of operating trucks and perhaps a bulk plant. If you sell burners, you have an installation and service department that spends money. There may be wastes in any one or all of these. There may be new methods that might cut costs. For instance:

1. Sales overhead might be reduced —or the money spent more effectively, —if some of the money used for personal selling were transferred to advertising.

2. The use of modern office machines might help reduce the office payroll.

3. The use of VENTALARM signals on the tanks of customers might eliminate the need for one or more trucks.

4. The use of the degree-day delivery system, or a revamping of truck routes, might also eliminate the need of one or more trucks.

5. There may be ways to reduce the through-put costs of your bulk plant, by using more modern equipment.

6. Installation overhead might be reduced through more careful planning of each installation and by tighter controls over materials.

7. Service overhead, also, might be lowered by raising the skill of your men, controlling inventory more carefully, and by installing a more efficient system of receiving and dispatching calls.

These are only a few of the suggestions that might be made. Cutting costs usually is a matter of paying attention to details and using imagination. One reseller visited recently saves a considerable amount of money yearly by repairing his own trucks, from motor jobs on down. The fact that all his trucks are of the same make simplifies his work. He also cut his electric power bill from $1,200 to $300 a year by installing a war-surplus diesel generator. The exhaust heat from this is utilized for building warmth.

Not all money-saving ideas can be applied everywhere, but it's a safe bet that every fueloil distributor can lower his costs of doing business in one way or another.

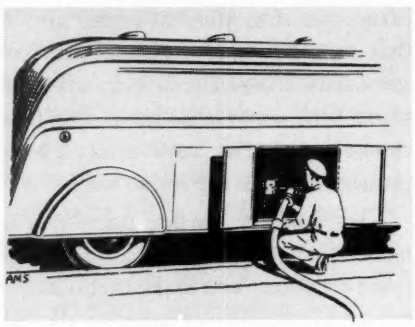
Advertise your Story

The presence of strong gas competition in your territory will bring changes in your advertising habits. No longer will it be enough to identify yourself as a reputable source of automatic heating equipment. Your name, your years of service, your long list of customers, your local standing—though still important—are secondary to a buyer choosing between oil and gas. That's because everything you can say about yourself can also be said by the gas utility about itself. You must first persuade prospects to choose oil over gas, then convince them that you are the one to do business with.

The best way to do this is to call personally upon each prospect. But that is the most expensive way and, in most areas, totally impractical. Too many prospects. This is where advertising helps. It takes the high cost out of personal calls by identifying those prospects most interested in buying—by limiting calls to those who are most likely to buy. It is the only practical way of reaching all prospects at one time. In this business, advertising cannot close a sale, but it can lead prospects up to the point at which closings are possible.

Good advertising is distinguished from poor by several qualities, all of which are essential. First, it reaches the greatest number of prospects at the lowest cost per thousand. Second, it attracts their attention through the use of appeals that interest them. Third, it is timed correctly. Fourth, it is consistent. To achieve these qualities, planning is necessary.

Your first problem is to select the advertising medium (newspaper, radio, direct mail, etc.) that reaches the most prospects at the lowest cost per thousand. To do this, it's necessary to know



where your prospects are. If you've studied your market recently, you do know. Chances are your local newspaper will do the job for you, but don't take this for granted. Get its circulation figures for the areas you're interested in; also its rate. If its circulation is 10,000, and the rate is 50c an inch, then the cost of a one-inch ad, *per 1,000 readers,* is 5¢. Compare this with the cost of, say, a one-minute spot announcement on your local radio station, or with painted bulletins, car cards, etc. Whichever gives you the best coverage at the lowest cost per thousand is the one to use.

Remember, though, that each advertising medium has its own strengths and weaknesses. For instance, just because you can't reach a thousand people for 5¢ with direct mail, don't rule out direct mail. Its big advantage is the opportunity it gives you for a personal approach to an individual prospect. Often a personal appeal brings better results than an impersonal ad or radio commercial.

Regardless of the medium you select, your advertising must be read and believed, if it is to be successful. It must attract attention and then say something that will cause a reader to say, "Yes, that's right." Once a prospect agrees with your appeal, he is half sold. At this point, you have a chance to sell him, and you'll most likely get your chance if you have made it easy for him to call you.

Timing is important. Traditionally in this industry, most people decide to switch to automatic heating in the spring and autumn, with autumn being the more important of the two. These, then, are the times when your advertising should be the most prominent. But watch for conditions that upset the usual course of events. The possibility of higher prices is one. A heavy influx of new residents is another. The possibility of material shortages is a third. If you keep close to your market, you will know when to change the traditional advertising pattern.

Above all, consistency is vital. It's the virtue of all successful advertising. Most people don't thoroughly read an ad unless they alreday are interested in the product or service featured. A person with an oilburner is not going to take time to read oilburner ads. A person who has decided to buy a new car this year, instead of an oilburner, very likely will not read oilheating ads. But the person who has come to the point of considering automatic heating is interested. He wants to know who sells burners. He wonders about price, quality, special features. If he doesn't see your ad, he's lost to you—unless of course a neighbor is one of your satisfied customers. The point is, people whom you don't know are always moving from a state of disinterestedness to one of interest, and your advertising must be consistent enough to catch all or most of them.

The big point to remember always is that oilheating has strong appeals on its side—good points that will convince many people that oil is the fuel they want. But you cannot expect people to know these points, and to place importance upon them, until you tell them. If natural gas has already arrived in your town, the sooner you start, the better. If it has not yet arrived, but will some day, you have time during which to get your story so well told that it will be remembered when the utility springs its campaign.

Social Security for Oilheating

Applying the new Law to Conditions of fueloil and burner Companies

by
William Hurd Hillyer

FUELOIL MARKETERS AND OILHEATING equipment dealers in their ownership-management role are brought into Social Security as potential beneficiaries under the newly amended Act. Fueloil and oil heat, however, as a related group presents contrasts of proprietary setup and therefore requires differing techniques to take every legitimate advantage of the new enlarged System. There are also certain slants pertinent to the industry, which would be overlooked in a generalized interpretation of the law.

If you are a marketer of fueloil your business is most likely conducted as a small corporation and you will be governed accordingly; but if yours is an oilheating equipment dealership the approach is probably quite different because you are an owner-proprietor. There are further differences in both categories depending upon the number and wage-caliber of employes.

In general, the Amended Act effective January 1, 1951, has wrought two notable changes.

1. Coverage is extended to an estimated 10,000,000 additional workers, including four and one-half millions that are self-employed. In the self-employed classification are proprietors of unincorporated businesses, besides members of certain designated professions. Coverage of self-employed persons, as well as of certain executive employees of corporations, is compulsory. Embraced in the ten million affected are at least 500,000 people now over 65 years of age who are presently eligible for retirement but who did not qualify under the old law.

2. Both the benefits paid out and the taxes assessed are materially increased under the revised Statute. At the same time, the retired beneficiary is permitted to earn as high as $50 a month in a "covered" employment, instead of the $15 limit under the old law, without curtailing his benefits. With the new setup, he is allowed to draw full benefits without any limit on his earnings after age 75.

Like all legal papers, the Act uses certain words and phrases which should be reduced to plain talk. The official name of "Social Security" in the sense we are considering is Old Age and Survivors' Insurance. As the name implies, the System is not a form of relief. The beneficiary earns the insurance in the combined dimensions of money and time. The money consists of contributions (taxes) paid out of his salary, either by his employer, or directly by him if he is self-employed. Since contributions are a percentage of his wages or self-employment income, the participant earns his insurance by making a requisite amount of money over enough time in work that comes under the Law. The "enough time" is measured by—

Detail of Coverage

Quarters of Coverage. These are simply calendar quarters, ending respectively March 31, June 30, September 30, and December 31. For an employee, a quarter of coverage is one in which he is paid wages of $50 or more in covered employment (which we'll define presently); for a self-employed person, the amount is at least $100 of self-employment income. Self-employment income of $400 or more in any one year is worth four quarters of coverage, regardless of how the income may vary in the calendar quarters.

As to *Covered Employment,* this means any work on which Social Security contributions are levied. The actual coverage is any work or profession except those specifically excluded —such as farm operators, law, medicine, architecture, or engineering, to name a few.

To become *Fully Insured* under Social Security you must have: (1) Six quarters of coverage in every case, and (2) either one quarter of coverage for each two "calendar quarters" after January 1, 1951 or one quarter for each two "calendar quarters" after you become 21 years old or 40 quarters of coverage. However—

You are *Currently Insured* if you have had at least six quarters of coverage within the three years before you become entitled to old-age insurance benefits or three years before your death.

Monthly *Retirement Benefits* are payable beginning at age 65, if you are fully insured. When you qualify for these benefits, supplementary benefits are payable to your wife if she is 65 or over and to your dependent unmarried children under 18 years of age. A husband may receive benefits at 65 on his wife's social security account if he is dependent upon her for support and if she is currently as well as fully insured when she retires at or after 65.

There are also *Survivors' Benefits.* These are paid after your death if you are either fully or currently insured. If fully insured, benefits are paid to your dependent children under 18, to your widow (or divorced wife under certain circumstances) if she is caring for your children or is at least 65 years old, and in some cases to your dependent aged parents.

Taking it the other way around (heaven forbid!) if your wife is fully insured by reason of her earnings, and you become a "dependent widower," you may qualify for a widower's benefit at age 65—provided she be also currently insured at the time of her death. However, if she (or you either, for that

matter) be only currently insured at death, no benefits are provided for survivors at age 65, though other benefits may be paid.

In addition, a *Lump Sum* death benefit is paid if the participant, whether you or your wife, should die either fully or currently insured. This sum is about three times the monthly benefit.

Under the old law, only employees were considered "workers" for Social Security purposes. The new law, as we've noted, takes in self-employed persons and gives them the same benefits as those enjoyed by wage earners and salaried people. Furthermore the amended law jacks up the amounts payable as retirement and survivors' benefits, the average increase being some 77% as compared with pre-1951 (Tables I and IA). Benefits may now run as high as $150 monthly. Formerly no earnings above $3,000 a year counted in accumulating bases for benefits. This limit has been raised to $3,600.

Taxes have been increased for employer and employee and a tax scale worked out for self-employed (See Table II).

So much for generalizations. Now for the facts peculiarly pertinent to you in your industry. Let's suppose you are a fueloil marketer, doing business as a small corporation in which you, and possibly your wife or working associates, own all the stock. We'll assume that your net earnings from the corporation for 10 years past averaged more than $3,600 annually. Much depends, so far as your Social Security status is concerned, on how these earnings have been handled and on how they will be handled in future.

If the corporation has been paying you earnings in the form of a salary or other compensation for work performed and the corporation so reported with deductions, you already have from that source alone, 40 quarters of coverage. This makes you fully and permanently insured under the amended Act under the maximum legal basis (though tax payments will have to continue until your death or retirement). Your benefits, when you become entitled to them, will be maximum benefits. If, on the other hand, you have taken any or all of your compensation in the form of dividends, your Social Security status will be correspondingly impaired. Remember, you must "earn" Old Age and Retirement Insurance on your pay as a "worker" in "covered employment," just like your corporation's other employees.

Irrespective of your own small corporation, however, and perhaps in an unrelated business, you may have earned as a "covered" employee the necessary quarters of coverage to give you a fully insured status. In such case it is likewise essential that your compensation from your business be in such form and amount as is most beneficial to you. Unless you already possess these magic "quarters" you should give consideration to accumulating them in one of the following two ways:

(a) Switch from "dividends" to "salary" in what you draw from your corporation, and pay the resultant tax —half by your corporation direct and half by you as a deduction. It is no longer considered economical to sidestep Old Age and Survivors' Benefit taxes, which provide a form of combined annuity and insurance, worth more than it costs.

(b) As an alternative, you can convert your corporation into a partnership or sole proprietorship, thus joining the ranks of the "self employed." This method has among its advantages a tax saving, as appears from Table II. In illustration, if you're an employee the combined cost to you and employer (in your case your own corporation) is 3%; but as a self-employed person the total cost will be only 2¼% to start with. The spread widens through the years, reaching 1⅜% difference by 1970. Your partners, if any, would enjoy a similar saving from such a conversion. Of course, before taking so radical a step you would weigh

TABLE I

Monthly Benefits for Retirement

Average MONTHLY "WAGE"	*Old Law* SINGLE	*Old Law* MARRIED*	*New Law* SINGLE	*New Law* MARRIED*
$ 50	$21	$32	$25	$38
100	26	39	50	75
150	32	47	58	86
200	37	55	65	98
250	42	63	72	109
300	42	63	80	120

*Wife 65 years old or over.

TABLE I-A

Monthly Benefits for Survivors of Insured (Coverage 5 Years)

Average Monthly "Wage"	WIDOW AND 1 CHILD *Old Law*	WIDOW AND 1 CHILD *New Law*	WIDOW AND 2 CHILDREN *Old Law*	WIDOW AND 2 CHILDREN *New Law*	WIDOW AND 3 CHILDREN *Old Law*	WIDOW AND 3 CHILDREN *New Law*
$ 50	$26	$ 38	$37	$ 40	$40	$ 40
100	33	75	46	80	52	80
150	39	86	55	115	63	120
200	46	98	64	130	74	150
250	52	109	74	145	84	150
300	52	120	74	150	84	150

	1 CHILD ALONE		2 CHILDREN ALONE		AGED WIDOW (65 OR OVER)	
$ 50	$10	$19	$21	$31	$16	$19
100	13	38	26	62	20	38
150	16	43	32	72	24	43
200	18	49	37	81	28	49
250	21	54	42	91	32	54
300	21	60	42	100	32	60

TABLE II

Calendar Year	*Tax— Employee Per Cent*	*Tax— Employer Per Cent*	*Tax— Self-employed Per Cent*
1951-53	1½	1½	2¼
1954-59	2	2	3
1960-64	2½	2½	3¾
1965-69	3	3	4½
1970 and after	3¼	3¼	4⅞

other factors, legal and income-tax-wise. In any event, you'll have to pay the tax as employer on all of your employees.

Self-employed Coverage

If you are in the heating equipment field, the chances are that yours is already an unincorporated business and that you are therefore self-employed. In that capacity—although the eventual benefits will be the same as those extended to employees, the manner and cost of qualifying for those benefits will be somewhat different.

(a) You are coverable by Social Security as a self-employed person if your net earnings from self-employment are $400 a year or more.

(b) For Social Security purposes you will be taxed on the amount of your net earnings from self-employment for each year beginning with 1951. In practice you'll simply copy your "trade or business earnings" schedule from your 1951 income tax return (not your 1950 income tax which you pay in March) on a Social Security Schedule which will be furnished with your 1951 tax blanks. Your first Social Security contribution will therefore be when you pay your 1951 Federal Income Tax in 1952.

(c) In Social Security lingo "net earnings from self-employment" mean your net profits or share of net profits (not what you actually draw out) from a business carried on by you or by a partnership of which you are a member. Non-business income of the following types are not included: rentals from real estate, unless received by you as a real estate dealer in the course of your business (in your case a "side line"); dividends and interest on stocks and bonds, capital gains and losses; income from an estate or trust of which you may be a beneficiary.

(d) Your "quarters of coverage" are figured on an annual net earnings basis, as set forth in a preceding paragraph.

(e) Although you have been hitherto excluded from the responsibilities and benefits of Old Age and Survivors' Insurance, you now participate therein but at a different tax rate from that imposed upon employees (refer to Table II). Your participation as a self-employed person is compulsory beginning January 1 of this year.

(f) If you have earned quarters of coverage as an employee before 1951 but lack sufficient number of such quarters to make you fully insured you can earn these quarters from now on as a self-employed person.

(g) There's a "new start" which became effective January 1st for all individuals whose benefits are to be computed under the liberalized formula. This new start is of great interest to you as a self-employed participant, because otherwise your average monthly wage as a covered employee before 1951, on which the amount of your benefits depend, would be greatly reduced by the inclusion of all the time back to 1937 when Social Security began. A conversion table, too complex for consideration here, is used by the Social Security experts in equitably determining this and similar factors.

Military service Credits

Under the 1950 amendments to the Act, social security "wage credits," equivalent to "quarters of coverage," will be given for active service in the armed forces of the United States during World War II. These credits, at the rate of $160 for each month of active service, can be used in determining the amount of your insurance benefits (1) to you and your family when you retire, (2) to your family if you should die; or, in general, (3) to the family of a service man or woman now deceased. You are eligible, if you've had 90 or more days of active naval or military service between September 16, 1940 and July, 1947—assuming, of course that your discharge or release from service was honorable. The 90 days are not required if discharge was due to disability in service, or to death therein.

You are not eligible for these World War II benefits if your military or naval service in that war entitles you to other Federal retirement benefits. On the other hand, your wage credits are not curtailed by any Veterans Administration pensions or compensations. Your survivors, if you're a World War II veteran, may draw Social Security benefits or receive increased benefits, due to the new provisions.

In this study of Social Security, particularly as it affects the fueloil marketer or oilheating equipment dealer, no mention has been made of the various forms of assistance, which are available to deserving persons by the several States with Federal collaboration. Such allusions would be in a quite different realm of inquiry.

One more point: if you are a Heating Engineer, you should bear in mind that Engineering as a profession is *excluded* from the operations of Social Security. Earnings derived from the practice of such profession do not count to your credit in acquiring the requisite status. If you have already acquired the requisite quarters of coverage, it might be well in future for you to segregate your engineering fees (if any) from your regular business income and thus effect a tax saving. After you retire at age 65 or later, you can earn unlimited fees as a professional heating or other engineer without curtailment of your benefits.

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J. Robert Tate, promotion and advertising manager of the New York division, Shell Oil Co., has been appointed chairman of the Petroleum Division of the Brooklyn, N. Y., Red Cross 1951 Fund Drive.

Charles H. Wagner on January 15 was elected a vice-president and director, Gerotor May Corp., Baltimore, Md. His former associations include the presidencies of American Oil Co., Lord Baltimore Filling Stations, Inc. and the Mexican Petroleum Corp. Also, he has been a director of Pan-American Petroleum & Transport Co. and an active member of the American Petroleum Institute.

Service on Contract

Reviewing the Trend toward a universal oilburner service Contract with Parts

by
Bert Dunphy

WITH RARE EXCEPTIONS, oilburner service departments have been stepchildren, tolerated and kept going, but always regarded with a jaded eye as something the average dealer would prefer to do without. Every dog has his day, though, and during two periods in recent years the service departments have come into their own.

The first time was during World War II when installations virtually stopped and the emphasis was on keeping all burners operating at their most efficient peak to conserve hard-to-get parts and materials, and, most important, to hold down consumption of rationed fueloil. Once more, during the scarcity of supply caused by the unprecedented number of installations put in during 1947 and a shortage of transportation facilities, the service department basked in the spotlight. Here again, every effort was expended to cut down fuel consumption by upping the effectiveness of operation.

Fifteen years ago service was used largely as a lever to obtain a fueloil contract, with the offer of free service very often made to anyone who would sign up to purchase heating oil for a specified period. Fueloil was cheap and the service performed concentrated more on correcting specific complaints or replacing worn out or defective parts at cost plus labor, rather than making any general effort to make the burners work better.

Service Techniques improved

By 1941, however, service techniques had improved to the point where cleaning and adjusting as a cause of service moved from sixth place in 1935 to second, reflecting the more careful attention being paid to burner operation. By the next year 27.2% of customers were under some form of service contract as compared with 17.9% the previous years, customers getting free service had dwindled from 20% to 2.1% and customers who had to call in for each service complaint increased to 70.7% from 62.1%.

Of course, this was the year after Pearl Harbor and service had become so important that income from service departments almost equalled the income dealers received from equipment sales. During the succeeding war years when equipment sales hit bottom, service departments were kept busiest, plagued by manpower shortages caused by the necessity of trying to replace men lost to war plants or called for military service. As the war drew to a close, the headaches faded and service departments continued the most important revenue producer for the average dealer.

It was during this period that the realization began to grow that service could be utilized effectively as a builder of public relations. The millions of families using domestic oilheating had been sold on the benefits of efficiency and economy, and the industry had profited from the resultant satisfaction the customer gained.

Typical service Contracts

Random selection of a dozen typical contracts in current use or used within the past year or two indicates clearly a trend toward the inclusion of some form of guarantee of parts replacements in addition to emergency service calls. All contracts examined constitute an agreement between the dealer and the consumer to purchase heating oil for a full year, with the effective date usually fixed around May, or some time previous to the commencement of the heating season. One of the contracts that covered the purchase of fueloil only was unique in that it was self-perpetuating from year to year.

Five of the contracts provided for "keep-filled" deliveries. Nearly all five had the automatic delivery provision written in the contract, with the customer given the option of indicating he would prefer to call for each delivery.

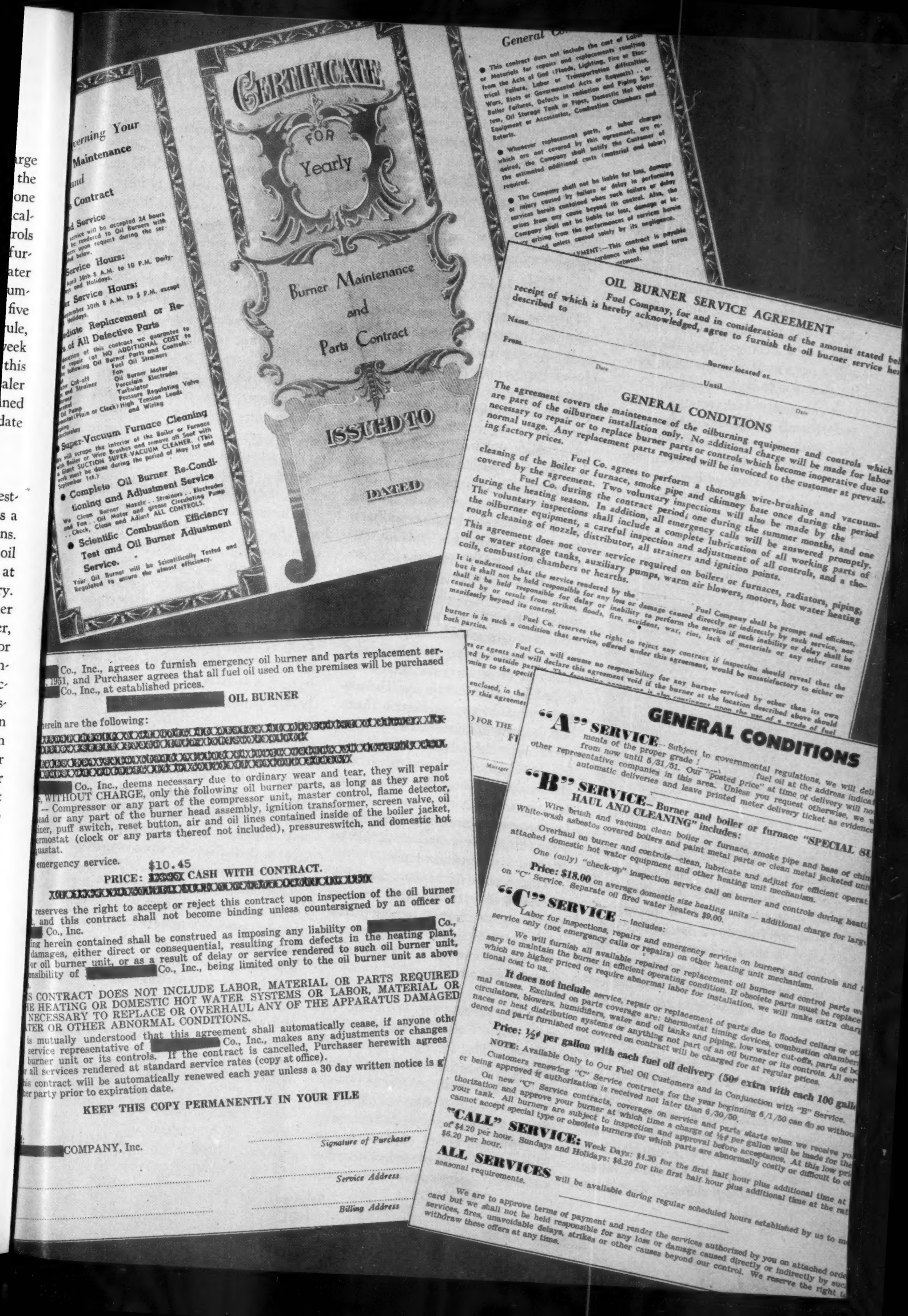
Twenty-four hour emergency service was promised in seven of the contracts, while four of them included a guarantee to replace without charge any defective burner part during the life of the agreement. In all but one case the parts were confined specifically to actual burner parts or controls and excluded repairs to boilers or furnaces, radiators, piping, tanks, water heaters and similar equipment. Summer clean-ups were arranged for in five agreements. The homeowner, as a rule, is asked to specify during what week or month he would prefer to have this work done, or it was left to the dealer to notify the customer when he planned to do this work so that a suitable date could be worked out.

Three Plans offered

One particularly successful Westchester County, N. Y. dealer offers a combined contract, with three plans. One plan covers automatic, metered oil delivery of all fueloil requirements at the posted price at time of delivery. The second portion covers a summer overhaul and cleaning of the burner, boiler or furnace, while the third is for complete burner service all year. Included under this are regular inspections, emergency service and all necessary repair and replacement parts on burners and controls. The customer can contract for fueloil delivery only, for fueloil and the summer clean-up for $18 or for all three services at a cost of $18, plus ½¢ per gallon added to each fueloil purchase.

Another comprehensive program is available in the Baltimore, Md. area. Here there are three plans which are tied in with a fueloil contract. A regular service contract is sold for $15 to embrace everything on the burner, all controls and combustion chamber replacements, where necessary. Annual overhaul also is included. A special

Four typical *oilburner service contracts, each of which provides for replacements of burner parts. Dealers can follow these samples as a pattern for their own local agreements. Company and trade names have been deleted.*



CERTIFICATE

FOR

Yearly

Burner Maintenance

and

Parts Contract

ISSUED TO

DATED

erning Your

Maintenance

nd

Contract

d Service

service will be accepted 24 hours
be rendered to Oil Burners with
ers upon request during the ser-
od below.

Service Hours:

April 30th 8 A.M. to 10 P.M. Daily
ys and Holidays.

er Service Hours:

ptember 30th 8 A.M. to 5 P.M. except
Holidays.

diate Replacement or Re-
s of All Defective Parts

duration of this contract we guarantee to
or repair (at NO ADDITIONAL COST to
the following Oil Burner Parts and Controls:

Fuel Oil Strainers
Fan
Oil Burner Motor
Porcelain Electrodes
Turbulator
Pressure Regulating Valve
and Wiring

Super-Vacuum Furnace Cleaning

We will scrape the interior of the Boiler or Furnace
with Boiler or Wire Brushes and remove all Soot with
a Giant SUCTION SUPER-VACUUM CLEANER. (This
work must be done during the period of May 1st and
September 1st.)

- Complete Oil Burner Re-Conditioning and Adjustment Service

We Clean Burner Nozzle . . Strainers . . Electrodes
and Fan . . Oil Motor and Grease Circulating Pump
. . Check, Clean and Adjust ALL CONTROLS.

- Scientific Combustion Efficiency Test and Oil Burner Adjustment Service.

Your Oil Burner will be Scientifically Tested and
Regulated to assure the utmost efficiency.

General Co

- This contract does not include the cost of Labo
or Materials for repairs and replacements resulting
from the Acts of God (Floods, Lighting, Fire or Elec-
trical Failure, Labor or Transportation difficulties,
Wars, Riots or Governmental Acts or Requests) . . or
Boiler Failures, Defects in radiation and Piping Sys-
tem, Oil Storage Tank or Pipes, Domestic Hot Water
Equipment or Accessories, Combustion Chambers and
Returns.

- Whenever replacement parts, or labor charges
which are not covered by this agreement, are re-
desired, the Company shall notify the Customer of
the estimated additional costs (material and labor)
required.

- The Company shall not be liable for loss, damage
or injury caused by failure or delay in performing
services herein contained when such failure or delay
arises from any cause beyond its control. Also, the
Company shall not be liable for loss, damage or in-
jury arising from the performances of services herein
contracted unless caused solely by its negligence.

YMENT:—This contract is payable
rdance with the usual terms
ment.

OIL BURNER SERVICE AGREEMENT

Fuel Company, for and in consideration of the amount stated bel
receipt of which is hereby acknowledged, agree to furnish the oil burner service he
described to

Name

From Burner located at

Date Until

Date

GENERAL CONDITIONS

The agreement covers the maintenance of the oilburning equipment and controls which are part of the oilburner installation only. No additional charge will be made for labor necessary to repair or to replace burner parts or controls which become inoperative due to normal usage. Any replacement parts required will be invoiced to the customer at prevailing factory prices.

Fuel Co. agrees to perform a thorough wire-brushing and vacuum-cleaning of the Boiler or furnace, smoke pipe and chimney base once during the period covered by the agreement. Two voluntary inspections will also be made by the Fuel Co. during the contract period; one during the summer months, and one during the heating season. In addition, all emergency calls will be answered promptly. The voluntary inspections shall include a complete lubrication of all working parts of the oilburner equipment, a careful inspection and adjustment of all controls, and a thorough cleaning of nozzle, distributor, all strainers and ignition points.

This agreement does not cover service required on boilers or furnaces, radiators, piping, oil or water storage tanks, auxiliary pumps, warm air blowers, motors, hot water heating coils, combustion chambers or hearths.

It is understood that the service rendered by the Fuel Company shall be prompt and efficient, but it shall not be held responsible for any loss or damage caused directly or indirectly by such service, nor shall it be held responsible for delay or inability to perform the service if such inability or delay shall be caused by or result from strikes, floods, fire, accident, war, riot, lack of materials or any other cause manifestly beyond its control.

burner is in such a condition that service, offered under this agreement, would be unsatisfactory to either or both parties.

Fuel Co. reserves the right to reject any contract if inspection should reveal that the

Fuel Co. will assume no responsibility for any burner serviced by other than its own es or agents and will declare this agreement void if the burner at the location described above should ed by outside parties. The foregoing agreement is also contingent upon the use of a grade of fuel ming to the specifi

enclosed, in the ay this agreemen

) FOR THE

Manager

Co., Inc., agrees to furnish emergency oil burner and parts replacement ser-
1951, and Purchaser agrees that all fuel oil used on the premises will be purchased
Co., Inc., at established prices.

[redacted] OIL BURNER

herein are the following:

[redacted]

Co., Inc., deems necessary due to ordinary wear and tear, they will repair
, WITHOUT CHARGE, only the following oil burner parts, as long as they are not
— Compressor or any part of the compressor unit, master control, flame detector,
ead or any part of the burner head assembly, ignition transformer, screen valve, oil
iner, puff switch, reset button, air and oil lines contained inside of the boiler jacket,
ermostat (clock or any parts thereof not included), pressureswitch, and domestic hot
uastat.

emergency service. $10.45

PRICE: [redacted] CASH WITH CONTRACT.

[redacted]

reserves the right to accept or reject this contract upon inspection of the oil burner
, and this contract shall not become binding unless countersigned by an officer of
Co., Inc.

ing herein contained shall be construed as imposing any liability on [redacted] Co.,
damages, either direct or consequential, resulting from defects in the heating plant,
or oil burner unit, or as a result of delay or service rendered to such oil burner unit,
onsibility of [redacted] Co., Inc., being limited only to the oil burner unit as above

S CONTRACT DOES NOT INCLUDE LABOR, MATERIAL OR PARTS REQUIRED
HE HEATING OR DOMESTIC HOT WATER SYSTEMS OR LABOR, MATERIAL OR
NECESSARY TO REPLACE OR OVERHAUL ANY OF THE APPARATUS DAMAGED
ATER OR OTHER ABNORMAL CONDITIONS.

is mutually understood that this agreement shall automatically cease, if anyone othe
service representative of [redacted] Co., Inc., makes any adjustments or changes
burner unit or its controls. If the contract is cancelled, Purchaser herewith agrees
r all services rendered at standard service rates (copy at office).

his contract will be automatically renewed each year unless a 30 day written notice is g
er party prior to expiration date.

KEEP THIS COPY PERMANENTLY IN YOUR FILE

[redacted] COMPANY, Inc.

Signature of Purchaser

Service Address

Billing Address

GENERAL CONDITIONS

"A" SERVICE—Subject to governmental regulations, we will deli
ments of the proper grade [redacted] fuel oil at the address indica
from now until 5/31/51. Our "posted price" at time of delivery will no
other representative companies in this area. Unless you request otherwise, we w
automatic deliveries and leave printed meter delivery ticket as evidence

**"B" SERVICE—Burner and boiler or furnace "SPECIAL SU
HAUL AND CLEANING" includes:**

Wire brush and vacuum clean boiler or furnace, smoke pipe and base of chim
White-wash asbestos covered boilers and paint metal parts or clean metal jacketed unit

Overhaul on burner and controls—clean, lubricate and adjust for efficient operat
attached domestic hot water equipment and other heating unit mechanism.

One (only) "check-up" inspection service call on burner and controls during heati

Price: $18.00 on average domestic size heating units — additional charge for largr
on "C" Service. Separate oil fired water heaters $9.00.

"C" SERVICE —Includes:

Labor for inspections, repairs and emergency service on burners and controls and f
service only (not emergency calls or repairs) on other heating unit mechanism.

We will furnish all available repaired or replacement oil burner and control parts w
sary to maintain the burner in efficient operating condition. If obsolete parts must be replace
which are higher priced or require abnormal labor for installation, we will make extra charg
tional cost to us.

It does not include service, repair or replacement of parts due to flooded cellars or ot
mal causes. Excluded on parts coverage are: thermostat timing devices, combustion chamber
circulators, blowers, humidifiers, water and oil tanks and piping, low water cut-offs, parts of bo
naces or heat distribution systems or anything not part of an oil burner or its controls. All ser
dered and parts furnished not covered on contract will be charged for at regular prices.

Price: ½¢ per gallon with each fuel oil delivery (50¢ extra with each 100 gall

NOTE: Available Only to Our Fuel Oil Customers and in Conjunction with "B" Service.

Customers renewing "C" Service contracts for the year beginning 6/1/50 can do so withou
er being approved if authorization is received not later than 6/30/50.

On new "C" Service contracts, coverage on service and parts starts when we receive yo
thorization and approve your burner at which time a charge of ½¢ per gallon will be made for the
your tank. All burners are subject to inspection and approval before acceptance. At this low pri
cannot accept special type or obsolete burners for which parts are abnormally costly or difficult to o

"CALL" SERVICE: Week Days: $4.20 for the first half hour plus additional time at
of $4.20 per hour. Sundays and Holidays: $8.20 for the first half hour plus additional time at the ra
$6.20 per hour.

ALL SERVICES will be available during regular scheduled hours established by us to m
seasonal requirements.

We are to approve terms of payment and render the services authorized by you on attached orde
card but we shall not be held responsible for any loss or damage caused directly or indirectly by suc
services, fires, unavoidable delays, strikes or other causes beyond our control. We reserve the right t
withdraw these offers at any time.

plan is an enlargement of the regular, and covers, in addition, tanks, clock thermostats, circulators and furnace blowers. Price for this plan is $17.50. The third portion of this contract is for an annual overhaul only at $9.

A company in Brooklyn, N. Y. for an annual charge of $10.45 sells emergency oilburner and parts replacement service, confining coverage only to the make of oilburner the company installs. All burner parts and controls, except clock thermostats, are included. This, too, is a contract that automatically renews itself unless notice in writing that it is to be cancelled.

Another firm has drawn up a burner maintenance and parts contract, coupled with an agreement to purchase fueloil, under which year 'round service is provided, along with replacement or repair of all defective parts, a furnace vacuum cleaning, burner reconditioning and adjustment service and combustion efficiency test.

One other domestic fueloil and service agreement presently in use calls for automatic monthly inspection calls from October to March, burner cleaning and inspection, boiler or furnace vacuum cleaning and emergency calls.

How Contracts Are Drawn

Here's the way one dealer phrases his oilburner service and parts agreement. By varying the wording to cover individual or local conditions, any dealer can use this, or similar, statements as a nucleus in preparing contracts for his own customers.

The agreement to deliver fueloil is covered in this way: "Subject to governmental regulations, we will deliver all your requirements of the proper grade of fueloil, at the address indicated on the attached card, from now until May 31 at the posted price at time of delivery, which will not exceed the price of other representative companies in the area. Unless requested otherwise, automatic delivery will be made and printed meter delivery tickets left as evidence of delivery."

Covering burner service and boiler or furnace summer overhaul and cleaning, the agreement specifies this service shall include: "Wire brush and vacuum clean boiler or furnace, smokepipe and base of chimney, if accessible. Whitewash asbestos covered boilers and paint metal parts or clean metal jacketed units. Overhaul on burner and controls includes cleaning, lubricating and adjustment for efficient operation and checking attached domestic hot water equipment and other heating unit mechanism. One check-up inspection service call on burner and controls during the heating season."

Replacement of Parts

The portion of the contract that provides for burner service and replacement of parts reads: "This shall include labor for inspections, repairs and emergency service on burners and controls and for inspection service only (not emergency repairs or calls) on other heating unit mechanism. We will furnish all available repaired or replacement oilburner and control parts we find necessary to maintain the burner in efficient operating condition. If obsolete parts must be replaced with units which are higher priced or require abnormal labor for installation, we will make extra charge for additional cost to us.

"It does not include service, repair or replacement of parts due to flooded cellars or other abnormal causes. Excluded on parts coverage are: Thermostat timing devices, combustion chambers, hearths, circulators, blowers, humidifiers, water and oil tanks and piping, low water cut-offs, parts of boilers, furnaces or heat distribution systems or anything not part of an oilburner or its controls. All services and parts furnished not on contract will be charged for at regular rates."

This particular contract then follows with the statement that the contract goes into effect when both parties have executed signed copies and the company has inspected and passed the oilburning system covered.

One other service agreement, that does not provide for parts replacement, lists "General Conditions," as follows: "The agreement covers the maintenance of oilburning equipment and controls which are part of the oilburner installation only. No additional charge will be made for labor necessary to repair or replace burner parts or controls which become inoperative due to normal usage. Any replacement parts required will be invoiced at prevailing factory prices.

"A thorough wire-brushing and vacuum-cleaning of the boiler or furnace, smokepipe and chimney base will be made once during the period of this agreement, and two voluntary inspections will be made, one during the summer months and one during the heating season. In addition, all emergency calls will be answered promptly. Voluntary inspections shall include a complete lubrication of all working parts of the oilburner equipment, inspection and adjustment of all controls and a thorough cleaning of nozzle, distributor, all strainers and ignition points.

"This agreement does not cover service required on boilers or furnaces, radiators, piping oil or water storage tanks, auxiliary pumps, warm air blowers, motors, hot water heating coils, combustion chambers or hearths.

"The company shall render prompt and efficient service, but shall not be responsible for any loss or damage caused directly or indirectly by such service, nor shall it be held responsible for delay or inability to perform the service if such liability or delay shall be caused by or result from strikes, floods, fire, accident, war, riot, lack of materials or any other cause beyond its control."

Inspection of Equipment

This contract then, also, includes a statement that the company must first approve the equipment involved before the contract becomes effective and that if the burner is serviced by anyone "other than the company's employees or agents, the contract is void."

For the past three or four years serious consideration has been given to perfecting some agreement that will be acceptable to the fueloil dealer and the consumer, under which the consumer will be guaranteed necessary service and replacement of parts at a reasonable annual price. The trend was recognized that oilburner service is best performed when it aims at economical operation and the use of a universal contract has proved most successful when it was devised not to return significant profits to the dealer, but rather to keep customers happy with smoothly functioning oilheating systems.

New Products at Philadelphia

Equipment Displays emphasize refinements in Automatic Heating

by
J. W. Schulz

"THERE'S AT LEAST half a million dollars' worth of heating equipment here," said a supply house owner visiting the Tenth International Heating and Ventilating Exposition, which opened at the Commercial Museum in Philadelphia on January 22 and closed on January 26.

Putting the question later to other show visitors, similar to this supply house owner in being more likely to underenthuse and underestimate than to be overimpressed, brought opinions that the equipment on display represented half a million dollars up to two or three million dollars.

The exhibits at the Philadelphia show emphasized fuel selection, fuel utilization, and the automatic control of heating and fuel-burning equipment. These elements are of prime importance in the overall picture of providing modern heating comfort for a tiny four-room house, a luxurious dwelling, an apartment house, a hotel, an institution, or a skyscraper. Often the selection of the fuel for heating decides the basis of the entire heating plant. In overall, the equipment displayed at the heating show proved that oil is still by far the favorite fuel for heating. Gas is gaining in popularity, being helped tremendously by the expansion of natural gas pipe line systems. This is causing more and more of the larger manufacturers of house-heating equipment to include in their lines gas conversion burners, gas-boilers, and gas-furnaces. Coal continues to sink in popularity, giving heating equipment manufacturers no reason to develop modern systems geared to the combustion of the solid fuel. At the show appeared a mere trace of interest in coal-stokers, although surprisingly the oddity of a domestic boiler with an integral chain-grate stoker showed up in one exhibit, nested among boilers used widely for wall flame and gun-type oilburners.

The Minneapolis-Honeywell control exhibit was the best example of a display that could absorb hours and hours of a heating enthusiast's time. Its excellent control demonstration boards contained literally hundreds of control devices, and covered almost every field of application.

Mercoid's men said they found greatest interest in oilburner controls. Out of the great display of well-known Mercoid control models, they were emphasizing the M41 warm air limit control, the Sensatherm room thermostat, and the Model JMI stack control panel, which was part of an outstanding action display.

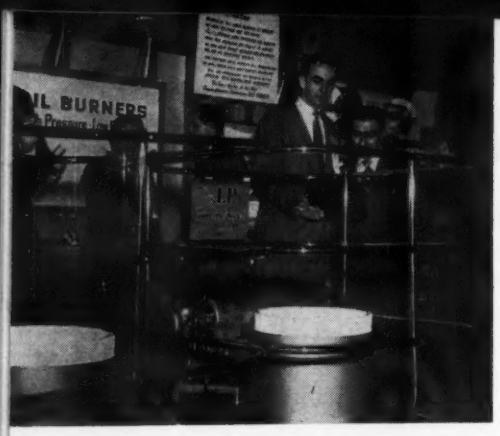
Penn Electric Switch Company was enthused at the show about its new Series 442 temperature control, two-wire single pole type for direct or reverse-acting applications, extremely sensitive and high speed because of its liquid-filled element, and having a differential adjustable from 7° to 45°F. This is for low-limit or high-limit use, for circulators and unit heaters, and in general for oil-fired hot water systems. Penn Automatic Control men have a good technical story about the company's having used the term "two-wire heat anticipation" 17 years ago.

White-Rodgers, at the show making a stronger bid for oilburner control business than ever before, was pointing out that now added to the old-established White-Rodgers' line are the Model 610 primary oilburner control panel for intermittent ignition, and the Model 611 for constant ignition. Features include rugged construction, no tinkering with or adjusting the combustion switch, and extra heavy load-carrying contacts.

Perfex men did the usual thorough job of making Perfex-minded any visitor who chanced near their big display of complete controls, and wanted to talk most about the brand new Model 175A room thermostat, two-wire snap-acting type, which features universal application. It has a tiny built-in rheostat which gives it heater effect for smooth heating, and which can be tuned by the service man for exactly the proper amount of thermostat self-heating.

Detroit Lubricator men had the new "Modulating Add-On Control" to tell show visitors about. A constant level valve and safety device for distillate oilburner equipment to start out, this can be formed into a complete automatic control device for a space heater, for example, by adding to it a mechanical automatic control device affected by room temperature.

Much interest and excitement was caused by the announcement of the Firetron Tube, part of the Fireye electronic control system, designed for ultra-safe and instant-acting protection against ignition failure and flame failure, the new Firetron Tube is a photo-conductive cell which "sees" *all* flames, being highly responsive to infra-red. That's supposed to make it entirely different, in an out-of-this-world way, from any previous electric-eye devices, including Fireye's own. There are some other startling features: the Firetron scanner is so compact that it is installed in standard ½" pipe; it replaces both flame rod and photoelectric scanner (makes obsolete Fireye's own flame rods of all kinds); requires no service other than keeping its lens reasonably clear of dirt so that it can



"see"; is described as almost indestructible; has unlimited life; never needs replacement.

Many of the equipment dealers at the show came mainly to see winter air-conditioning equipment of the furnace-duct type, engineered for smallest homes. Included among these dealers were many greatly interested in oil-fired, ceiling-hung units, which are new in recent years and which are being applied so widely and successfully that almost every lively oil-heat equipment dealer wants to include them in his line.

Norge, for example, featured at the show an uncommonly wide variety of oilburners, boilers, and furnaces, together with its Series OF 600 horizontal "suspended" oil-fired furnaces for .75, 1.0, and 1.5 gph.

Jackson & Church had in its booth the largest suspension type winter air-conditioner an ambitious dealer could dream of selling; it is fired at 10 gph, no less! Also featured was the Jackson & Church "Power Rated" series of furnaces for commercial and industrial applications, made in nine sizes with the smallest fired 3.5 gph, and the largest giving a Btu output of about four million, with no gph rate specified although this seems to jib with perhaps 35 gph!

Perfection Stove Company featured its Superfex oil-fired suspended furnaces in two sizes, one fired 1.4 gph by a pressure burner, the other fired at 1.9 gph. The 1.4 gph model features a two-speed fan having blades that can be adjusted easily to increase or decrease the amount of air circulated. Brand new at the show was a Superfex furnace-type winter air-conditioner, fired .85 gph by a pressure burner. Featured most in the big Superfex booths, however, was the Superfex line of "Homogen-Air" oil-burning winter air-conditioners; three-stage oil firing and two-speed circulating blowers; three models listed in the literature for .85, 1.2, and 1.5 gph.

The Luxaire line of The C. A. Olsen Manufacturing Company includes the counterflow furnaces for oil or gas, which were the big show feature for Luxaire. Luxaire's large oil or gas furnaces, in two sizes for 1.75 and 2.0 gph, were new at the show. Of course, this line includes dozens and dozens of models engineered for different applications and firing arrangements.

Winkler, the U. S. Machine Corp., featured its low pressure oilburner as diligently as at previous shows, and in addition announced the new Winkler Universal warm air winter conditioner, Model WU Series. The furnace is universal several ways; can be fired by a high pressure burner, or a low pressure burner, or the new Winkler vaporizing Press-O-Vap oilburner, or a Winkler gas burner that can use any kind of gas. It comes in a gravity model for up to 56,000 Btu loads, also in forced models for basement forced-air, utility room, and counterflow installations, all for 76,000 Btu output.

The Metropac oil-fired air conditioner continued at Philadelphia to astound furnace-duct equipment dealers who have not kept up with the times and therefore do not know that this furnace-type unit provides year 'round hot water. According to the show display featured by the Metromatic Manufacturing Co., which makes the Metropac, this winter conditioner is the only furnace unit which has a built-in hot water unit. The .85 gph unit has a 30-gallon Monel hot water tank right under its jacket; the 1.25 gph unit has a 40-gallon tank; the 1.95 gph unit has a 50-gallon tank.

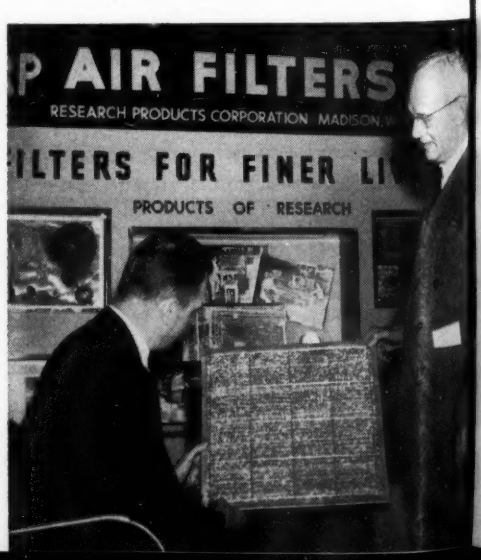
Turb-O-Tube Furnace, Inc., in a good neighborhood at the Philadelphia show (being right next to the FUELOIL & OIL HEAT booth), boasted as usual of the exceptionally high efficiencies given by its winter conditioning units of the air-tube furnace type. Its brand new High Boy, for example, is said to give about 450° stack temperature when fired to give rated output; comes in two sizes for .75 and 1.00 gph. Turb-O-Tube also has three sizes of "hanging units," suspended furnace type, for .75, 1.0, and 1.35 gph.

Syncromatic Hi-Cap steel furnaces for oil-firing were offered in ten sizes for from 3.0 to 10 gph, making it clear that Hi-Cap stands for high capacity. Ordinarily completely welded in one piece, the sections of these big furnaces can be shipped knocked down, in three pieces, to permit taking them through a three-foot door and assembling them in place. The Syncromatic Corp. also featured the Model OFB 621 oil-fired High Boy, having a heat exchanger of 10 gage steel, for firing at .85 gph.

The Waterman-Waterbury Company had perimeter heating and floor panel heating on its mind at the show, thus featured its new DownFlo Series. Made for oil or gas firing, this comes in three sizes for from 48,000 Btu (gas-fired) up to 100,000 Btu. The very complete Waterbury furnace line includes dozens of furnaces and conditioner models for oil, gas, and coal.

Ingersoll Products Division of Borg-Warner Corp. was on hand at the show with a big display of winter conditioning units and gravity furnaces; ten sizes all told; four sizes of oil-fired units, having pressure burners, and rated from .95 gph to 1.45 gph. The line includes models for gas and coal.

J. V. Patten Co., specializing in winter conditioners for lowest-cost homes, announced at the show the brand new Model 4100 "Sun Fuel-Master Heatrap." A 1.0 gph flame burns in a steel combustion space 14" deep, 16" wide, and 48" high; is downdrafted to an extreme degree with the products of combustion first flowing to the top of this chamber, then leaving at the bottom. Flowing down around the sides of the refractory firebox, the gases leave the steel combustion space through an opening located under the



firebox. Direct-draft relief holes avoid the pulsation which without them would be expected as a result of the drastic downdrafting. 525° stack temperature is reported from the low-priced furnace, together with overall efficiency of 81%.

Weil-McLain's exhibit got a rise out of old-timers, for it featured the famous Weil-McLain cast-iron round boiler basic design, now modernized only in details here and there, which makes the old-timers declare you can't beat the durability and high-efficiency characteristics of some of the old boilers made perhaps 25 years ago.

Weil-McLain showed for the first time its cast-iron "snug baseboard panels," declared outstanding for the radiant heat given by their hot fronts, and boasted as suitable for two-pipe steam as well as hot water.

Chrysler Airtemp's men had big news at the show: first, a new line of oil-fired steel boilers, gross Btu outputs of 110,000, 165,000, and 220,000; second, residential cooling units to be used with furnace-duct type heating plants, and which provide the dehumidification and cooling of real summer air conditioning.

The Kewanee Cottage Boiler, just added to Kewanee's boiler line and announced at Philadelphia, is a round, vertical firetube job designed for oil or gas firing, rated at 1.1 gph. Attractively jacketed in two-tone green, it is small and compact, and was brought out to give a modest-budget home owner a real Kewanee product.

Preferred Utilities emphasized its Unit Steam Generators (20 to 500 hp, using No. 5 or No. 6 oil) and horizontal rotary cup burners for from 15 to 150 gph, and announced its new Preferred combination gas and oil burner unit for the commercial industrial field. This fires from 15 to 150 gph oil, and equivalents in gas.

An entirely new model just was added to the popular line of Spencer steel and cast-iron boilers, made by the Lycoming-Spencer Division of Avco Manufacturing Corp. Announced at the Philadelphia show, this is described as a low waterline commercial steel boiler. It provides two advantages new to the Spencer line: 1. Exceptionally low waterline, the result of locating the second pass of firetubes next to, instead of above, the first pass of firetubes; 2. Ease of getting the boiler into a boiler room, which results from its being made up of two sections, which are assembled in the boiler room.

Good for up to 100 lbs. water pressure, this new Spencer boiler can heat directly the hot water radiation loads of large, tall buildings. It permits using radiant, baseboard, and other types of hot water heating in tall buildings.

Bundyweld steel tubing for radiant heating was of tremendous interest to equipment dealers worried about copper tube shortages' preventing installing radiant systems. It consists of rolled strip steel electro-plated with copper, then rolled laterally twice to form a double-walled tube. Finally, heating the tube in an electric furnace melts the copper, and on cooling the molten copper solidifies, bonding the tube together to form a solid, laminated structure. One end of each tube arrives expanded when the contractor orders this, simplifying joining tubes together for radiant grids; no couplings are needed at such joints. It is emphasized that the reason Bundyweld lasts for years and years in radiant systems, with no corrosion or deterioration to speak of, is that such systems are *closed* systems, the same water remaining in them for long periods. There's lots more to the Bundyweld story, and it's worthwhile for radiant-heat specialists to get the full story.

Bacharach Industrial Instrument Co. appeared at the show with its full line of combustion testing instruments, recorders, etc., and delighted furnace-duct men no end by bringing out a circular slide rule device which ends all fpm and cfm problems. Knowing the size and fpm of the register in a room, you can tell in two seconds from this "Grill Velocity Finder" the cfm delivered to the room. But that's not all. Knowing the temperature of the delivered air, you can find out at the same time the amount of heat being put into the room by the register, and can compare this with the Btu heat losses of the room.

FIROMATIC (Morse - Smith - Morse, Inc.) turned up at Philadelphia with a brand new fusible gate valve, sizes ¾" and 1", which can be used for oil or gas; also brought the news that Boston now requires that all new range burner installations must have a fusible-type valve. To renew the yearly permit for already-installed range burners, they also must be equipped with a fusible valve.

Maid-O-Mist showed a new balancing valve adapter for forced hot water systems; it is applied to a regular pipe tee, threaded or solder type. There's a brand new Maid-O-Mist "Cabinet Convector Humidifier," the only one of its kind, designed to permit boiler-radiator men to give their customers real humidification in winter, automatically and at low cost for the equipment; evaporates up to five gallons of

water per day; fits nicely into the cabinets of convector-type steam or hot water radiators.

F. D. Dwyer Manufacturing Co., well-known for making combustion test instruments, displayed at the Philadelphia show for the first time its new, entirely different dial-type CO_2 testing instrument. This is said to be exceedingly easy to read, because of its needle showing the percent CO_2 on a dial of generous size. It takes a test within 20 seconds, is easy to operate, and is said to be accurate to ¼% CO_2.

A piece of literature turned up at

the show on the Thermolok, an inexpensive device for locking all types of room thermostats without in any way interfering with the air flow through them. It seems highly practical and much-needed for clock thermostats which, boxed in by certain arrangements to keep employees and tenants from meddling with them and setting up the heat, are not sufficiently ventilated and won't work properly. It has a lock and key, and is snapped in place around a room thermostat.

Radiator Valve Company of America, offering the Steamheat Master Vent-Valve, produced at the show an exhibit that could take at least two hours of the time of any heating specialist interested in the in's and out's of one-pipe steam plant behavior. For one thing, this valve can vent at tremendous speed, having a giant-size port that seems free of drop-away trouble because a Klixon disc drives the movable part of the valve to either its closed or open position, working at about 180°.

Monarch proudly announced its new Fig. G-81 combustion head, described as having all the advantages of the highly developed Monarch head it replaces, but as being exceedingly low-priced because refinements in design have adapted it to easy production. Suitable for from .60 to 2.0 gph, it's a specialty that can be studied on the job easily by any expert seriously determined to obtain excellent combustion from pressure burners.

Sundstrand came out with a whole new line of fuel units, five capacities in the single-stage type, and five in the two-stage type, for nozzle outputs of 3, 6, 9, 14, and 20 gph. For those who want out-of-this-world performance from pressure burners, there's the solenoid device for use on any of the fuel units; it's a solenoid-operated unloading valve that gives sharp cut-off. The strainers on the fuel units are of new design, making them rugged and easy to clean.

Combustioneer (The Steel Products Engineering Company) packed a crowd of combustion-minded men around its exhibit all during the show. Reason: Side-by-side two oilburners were firing away in open combustion chambers. On the left was the Combustioneer pressure burner, fairly well known in the industry by now, capable of 1.65 to 2.5 gph, and featuring the triple-velocity Visorhead for high CO_2, extra-clean combustion, and low oil bills. On the right, and the big reason for the crowd of onlookers, was the spanking new Combustioneer low pressure gun burner.

One big feature of the Combustioneer gun burners is that their high-pressure and low-pressure fuel units are interchangeable.

Combustioneer's low pressure burner boasts a simple fuel unit, easily removed from the burner in its entirety, and featuring a constantly variable gph rate with the burner in operation. The unit is engineered to be long-lived; its only wearing parts are of steel running on aluminum-bronze. It is engineered for mixing behind the nozzle the oil and compressed air led through the gun tube by separate lines; uses 1½ to 2½ pounds atomizing pressure; fires from .65 to 3.0 gph. The men in the Combustioneer exhibit explained that this low-pressure job uses Nos. 1, 2, and 3 oils, also heavier domestic oil, without readjustment. They declare it suitable for fueloils too heavy for pressure burners, and mention No. 4A oil, seemingly having in mind an oil heavier than can be considered domestic fuel-oil, with a viscosity of 70 or higher. Combustioneer had plenty of other equipment to show, but its new low pressure gun burner was the item that drew the interest of the dyed-in-the-wool oilburner men.

Combi-Matic domestic gas-oil burners, in one type with a vertical firing head and another type with a horizontal gun tube, fascinated many burner men because they are designed to overcome the problem of the oilburner nozzle plugging because of overheating when gas is being fired. The vertical head Combi-Matic burner at the show had no refractory combustion chamber, and this relates to keeping the nozzle cool. The horizontal gun tube model has an interesting hydraulically-operated nozzle retractor, which moves the nozzle 4" back, away from its firing position, when not firing with oil.

HomEase Products Company announced that since it last exhibited it has expanded its line of HomEase con-

version burners and oil-fired boilers. There are now three sizes of deluxe Model HE burners, for up to 15 gph, two sizes of the conventional-design Model TM burner, and a Model BEF flange-mounted burner engineered especially for manufacturers of small oil-boilers and oil-furnaces. The HomEase boast is that its Firestat automatically tunes the burner for higher CO_2 during usual operation than for cold starts, producing for example 13% CO_2 with the chimney and firebox hot, but producing 10% or 11% CO_2 on cold starts to insure clean combustion. Another feature lies in the special combustion head adjustment which is designed to match the flame shape to the shape of the firebox. By moving a knob on the side of the gun tube, with the burner running, a service man obtains an extremely wide or narrow flame

The excellent traps and other specialties for modern two-pipe steam plants, displayed so wonderfully at the heating show, stayed on the minds of some show visitors all night. These visitors were at The Benjamin Franklin Hotel, a favorite stopping place for heating and oilheating men. The nights of the show, when turned on radiators in the hotel gurgled and pounded intermittently until dawn, keeping the minds of the heating experts on heating. One heating engineer turned off his radiator to get some sleep, and says when he woke freezing the next morning and turned it back on, it banged and jumped with water-hammer and seemed as if it were being busted to pieces by a sledge hammer. He was tempted to turn over to the hotel manager some of the excellent heating ideas he'd gotten at the show, but decided instead to try to apply them in his home town.

Interest is high at Largest Heating Show

ONE OF THE MOST successful and encouraging Heating and Ventilating Expositions held to date closed on January 26, after a week of convention sessions and equipment exhibits. The American Society of Heating and Ventilating Engineers held its 57th Annual Meeting from January 22 to 25 and sponsored the 10th International Heating and Ventilating Exposition, January 22 to 26. Meetings and morning technical sessions were held at the Bellevue-Stratford Hotel, equipment exhibits and afternoon technical sessions took place at Commercial Museum.

More than 300 exhibits crowded the huge floor, in what was described as the largest show of its type ever housed in the Commercial Museum. Equipment exhibited embraced virtually all types of heating and air conditioning units for domestic, commercial and industrial application. Sixty-four of the exhibits displayed oilburners or oilfired boiler and furnace-burner units, designed for domestic use. Of this group, which comprised about 20% of the total number of displays, 17 could be identified as primarily manufacturers of domestic oilburners, 1 was an industrial oilburner manufacturer, 20 were producers of heating boilers and 26 made warm air furnaces.

Interest displayed by dealers was high and manufacturers, generally, were enthusiastic about the success of the Exposition. Total attendance rivalled the high points of other years, with nearly all the exhibit-viewers seriously looking for equipment innovations and improvements and anxious to talk with manufacturers and others about the outlook for production and sales in 1951. These subjects were uppermost in everyone's mind, with the consensus agreeing that, in the absence of further cuts or restrictions, satisfactory levels of production and volume could be achieved for the first six months of the year, at least.

New products introduced, or improvements incorporated in existing models, are described in a separate article in this issue.

The ASHVE, as part of its four-day program, held numerous committee and business meetings and sponsored open technical sessions each day. A wide variety of topics were covered in the 17 papers and a symposium presented during the six technical sessions.

The morning session on January 23 was opened with a report of the Tellers of Election, which announced the election to the presidency of Lauren E. Seeley, dean of the Engineering Experiment Station, University of New Hampshire, Durham, N. H. Other officers named are: First vice-president, Ernest Szekely; Second vice-president, Reg F. Taylor; Treasurer, Howard E. Sproull. Installation of the new officers took place on January 25 at the concluding session of the meeting.

First technical Session

The first technical session of the week was held on Monday morning, January 22, at the Bellevue Stratford Hotel, as were all similar morning gatherings. It opened with a paper prepared by F. W. Hutchinson, professor of Mechanical Engineering, University of California; D. L. Mills and L. J. LaTart, both of Revere Copper & Brass, Inc. Entitled, "Losses from a floor-type panel heating system," it declared that floor type panel heating systems cannot be operated economically without some type of insulation and that uninsulated floor type panels suffer heat losses of 30%. The opinion was obtained from tests made during the 1948-49 and 1949-50 heating seasons in a regular occupied building, with two floor type heating panels in which the coils were embedded at different depths. Both systems under 3/4" sinuous coil copper tubing on 9" centers, embedded in a 4" concrete floor slab, over a 6" gravel fill.

Other papers delivered at this session told of "Design factors in panel and air cooling systems," describing the effective use of cooling panels in removing unwanted heat from rooms, and a discussion of "Operating data from a sidewalk snow-melting system."

Four technical papers were presented during the morning session on January 23. John W. Tieman and Frederick L. Bagby, both of Batelle Memorial Institute, Columbus, Ohio, reported on "The efficiency of bituminous coal burning space heaters," incluuding data on useful heat transmitted to a room from a typical flue pipe installation, with curves showing over-all heating efficiencies.

"The measurement of smoke," which followed, was a report of tests made at North Carolina State College on methods of measuring smoke produced by domestic heating units burning oil. K. O. Beatty, Jr. and James E. Deas, Jr., both of the College, prepared the paper, which presented a discussion of qualitative and quantitative methods, including Ringelmann smoke charts, filter spot, deposit and light transmission smoke measuring methods. The general conclusion reached stated that each method measures different aspects of smoke and not smoke itself. Further, the simultaneous use of several methods gives more complete information than any one alone and should aid in predicting the effect of combustion conditions on fuel performance.

Reports on OHI Test Unit

The two remaining papers dealt with results of tests made at the Society's Cleveland Research Laboratory, using a fueloil combustion test unit designed by the Oil-Heat Institute of America. David W. Locklin and George V. Parmelee, research engineer and research associate, respectively, at the Laboratory, conducted the tests.

"Smoke measurement in a fueloil test unit," was the title of the first paper on this subject. It reported results of an investigation, describing the light transmission and filtration methods of measuring the smoke density of oils burned in the test unit, and concluded that smoke indications revealed by both methods did not bear a consistent relationship. Of the two techniques the filtration method was judged the most suitable for use with the test unit because it possessed greater sensitivity and range in measuring light

smoke.

The project was begun in 1947 when work was started through OHI's Engineering Committee to design a pressure-atomizing type oilfired boiler unit for the tests. The principal criterion of fuel performance was considered to be smoke production with respect to the excess air supplied, with field observations confirming that the unit had possibilities but that improvements in instrumentation and techniques were required. Extensive tests then were conducted during 1948 and 1949 to complete the project.

Summarizing the authors stated that further investigation still is needed on the effect of different sampling techniques and that aspects of smoke production which are indicated by different methods should be looked into in relation to weight concentration of smoke and effects upon performance.

The companion paper, prepared by the same researchers, described tests made with the test unit to determine the extent to which it could be used to distinguish between, and reproduce, the burning qualities of different fueloils as indicated by smoke density and flame length at a given percent CO_2. Tests were conducted with six different fueloils, which from field experience were known to have different burning characteristics. All tests were made under standard conditions, which do not necessarily reflect identical combustion conditions, but under which it was found the best control was possible.

Test Procedure

After a one hour warming up period, the performance of each of the six oils was determined by at least a dozen tests in which the air supply was varied in steps over the range of about 8 to 15 percent CO_2. Check tests next were made to investigate reproductibility and further tests conducted to determine the effect on fuel rating of different conditions of ignition, turbulence and oil supply pressure.

Satisfactory reproductibility of results was obtained with all but one of the sample fuels. Increasing the delivery pressure of the oil not only increased the firing rate but also produced cleaner combustion and a slightly shorter flame, while at constant air-fuel ratio it was found that decreasing the air shutter opening reduced smoke density and flame length and increased CO_2 readings.

The effect of switching the ignition off during steady operation was found to increase the air supply rate and increase smoke production and smoke densities during shutdown proved to be greater than during starting, while smoke densities during starting were higher than during steady operation.

Further, it was revealed by the tests, that a good degree of correlation was obtained between the test results at similar firing rates and these indices: API gravity, hydrogen-carbon ratio, diesel index and burning index.

It was concluded that a greater number of oils must be investigated if these correlations are to be so established that a simply obtained index can be used to rate the burning qualities of fueloils and that investigation should be made to determine whether these correlations may be extended to other types of burners and in field installations. In order to determine the significance of the results obtained with the test unit, the report said, it would be desirable to investigate fundamental principles of fuel atomization, ignition, air-fuel mixing and smoke measurement.

The first of two afternoon sessions was held on January 23, opening with a paper by Eric A. Walker and John E. Coolidge, both of The Pennsylvania State College, containing a short historical outline of the development of electrostatic precipitation for air cleaning. The "Theory of earth heat exchangers for the heat pump" was discussed in a paper prepared by L. R. Ingersoll, F. T. Adler and A. C. Ingersoll, all of the University of Wisconsin and H. J. Plass, Stanford University.

George S. Smith, University of Washington, Seattle, in talking about "Factors useful in ground grid design for heat pumps," said studies indicated the average city lot is too small to supply enough heat to warm a house. "Thus the ground grid is practicable," he continued, "only where larger lots are available, or where very special soil, moisture and subsurface conditions are found."

The January 24 morning session was devoted to a symposium, "Man and his relationship to air." Nathaniel Glickman, assistant professor of medicine and research physiologist, University of Illinois Medical School, was moderator. Five speakers participated.

The afternoon session on January 24 included a description of "Field studies of heat losses from concrete floor panels," prepared by C. M. Humphreys, C. V. Franks and L. F. Schutrum, all on the staff of the ASHVE Research Laboratory, Cleveland. During the summer of 1949 thermocouples and heat flow meters were installed under four houses to study the heat losses from floor panels to the earth. These studies, the report indicated, showed that the greatest part of the heat loss from a floor panel occurs around the perimeter of the panel, where insulation will be most effective.

Results indicated also that it was particularly important that the panel be separated from the foundation by suitable insulation and that 4" hollow clay tile did not appear to be any more effective as an insulation than an equivalent thickness of gravel.

N. O. Kirby, Chicago, told of the search for practical methods to harness waste heat from diesel locomotives to heat railroad cars and a paper, drawn up by three technicians from Forest Products Laboratory, Madison, Wis., explained tests undertaken to determine the water permeability of 100 building papers and sheet materials.

Entertainment for attending members and their guests was highlighted by the Society's annual banquet on January 24, at which Lester T. Avery was presented with a past president's emblem. In turn, he announced award of the Anderson Medal to Samuel R. Lewis, consulting mechanical engineer, Chicago. The medal, awarded for "outstanding contributions to the advancement of heating, ventilating and air conditioning" will be presented formally to Mr. Lewis when he returns from a trip abroad.

A welcome tea and brunch, sightseeing tour, luncheon and fashion show and a bus trip to Atlantic City were arranged for by the Ladies Entertainment Committee.

Should Servicemen be deferred?

Are these Men indispensable or critical to civilian, defense Activity?

by
W. O. Spiess*

Editorial note: While this article by Mr. Spiess is largely a summary of the Institute's presentation to Washington on behalf of service manpower, it will also serve another purpose, Dealers can study it for ideas to use with their local boards. In spite of all the planning in Washington by manpower authorities, the local board is autonomous . . . it has the final word on every individual.

ONE OF THE FIRST PROBLEMS that the new mobilization economy has left at the doorstep of the oilheating industry is that of maintaining adequate numbers of experienced oilburner servicemen. The rapid growth of the industry since the end of World War II has kept oilheating people and their trade associations actively engaged in finding ways and means to attract and train new qualified personnel. Although the industry has done an excellent job on this matter, burner servicemen are still in short supply. As a result, the calling of military reservists and the drafting of burner servicemen pose a real threat to continued prompt and proper servicing of oil installations.

Oil-Heat Institute of America has taken the lead in presenting the case for deferment of oilburner servicemen to the proper authorities, and as long as manpower remains critical, OHI will head the effort to guard against shortages of service personnel that might affect the public's health and welfare.

On August 3rd, last, the U. S. Department of Labor released its original list of critical occupations. This list is used by the Department of Defense in considering requests for deferments of reservists and members of the National Guard: it does not bind local draft boards. Oilburner servicemen, as such, were not included in this list, but a spokesman for the Department of Labor said that burner servicemen were included under the category "maintenance mechanics." Later the Department changed that opinion and indicated that burner servicemen were not considered maintenance mechanics and were not covered under the list of critical occupations.

The Distribution Division of OHI took immediate steps to file a formal petition to request the deferment of burner servicemen. After determining the kind of information required, a survey went to all dealer members. The response was excellent and the information collected formed the backbone for the petition. Mr. F. C. Haab, National Chairman of the Distribution Division, signed the petition and personally presented it to the Secretary, Committee on Essential Activities and Critical Occupations, on January 25th. The petition is reproduced below.

PETITION TO
"COMMITTEE ON ESSENTIAL ACTIVITIES AND CRITICAL OCCUPATIONS"
COVERING ESSENTIALITY OF JOB OF OILBURNER SERVICEMAN

This petition follows the order and numbering of the data listed in the "Check List of Information to be Supplied by Petitioners." To develop the information suggested, a survey of the industry was made in early January, 1951. The 402 replies received from all sections of the country constitute a group which we believe is representative of the entire industry.

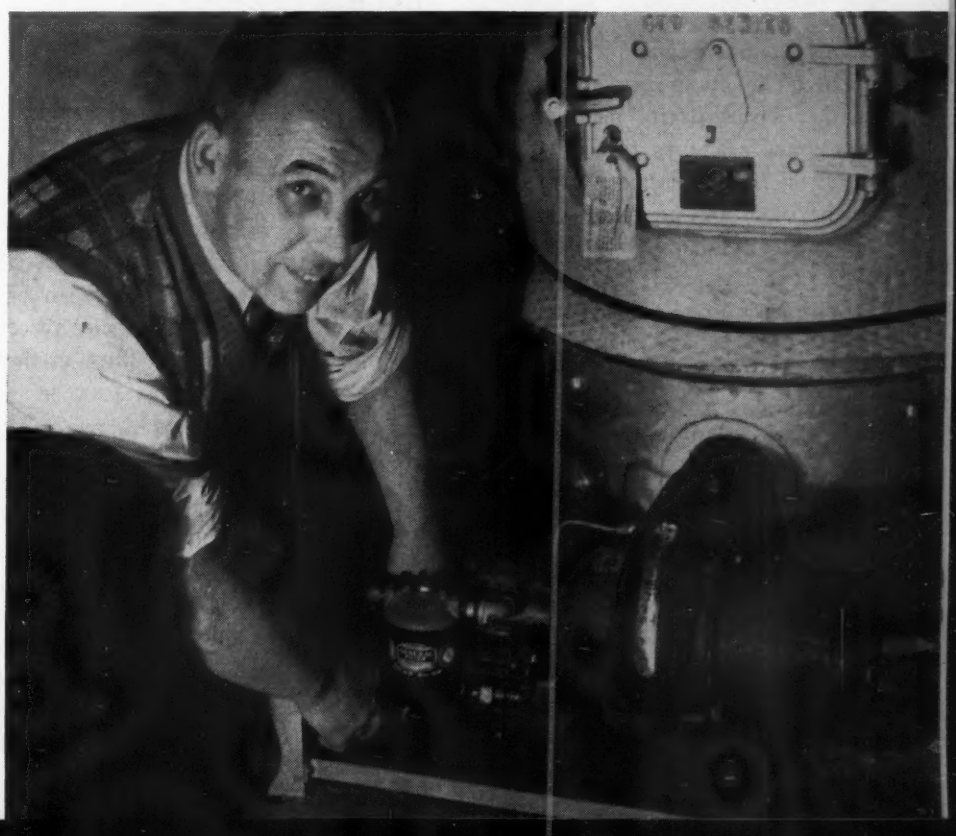
1. *Description of Job of Oilburner Serviceman*

Reference is made to the fact that the subject job is most inadequately described by the Dictionary of Occupational Titles, Volume I, 5-83.024: Oilburner—Installation and Serviceman. Part (2) of that definition which refers to servicing oilburners is totally incomplete and inadequate. That definition follows:

"When servicing oilburners, observes color and height of flame and volume of smoke given off to determine probable cause of faulty operation. Cleans strainer and sediment bowl by removing foreign matter and wiping parts with rag. Scrapes carbon deposits from inside of burner pot with a knife. Checks draft of flue by means of a draftstat and adjusts damper accordingly by adding or removing balance weight."

Analyzing that definition sentence by sentence:

Sentence 1—"When servicing oil-



*National secretary, Distribution Div., Oil-Heat Institute of America, New York.

burners, observes color and height of flame and volume of smoke given off to determine probable cause of faulty operation."

Almost all calls for oilburner service result from non-functioning of the oilburner and there is no flame or smoke to observe. In cases when the unit is operating observance of these items, among others, is simply the visual part of the job of comparing that particular unit's operation with known and proper combustion characteristics. The important work of diagnosis and treatment comes after visual inspection.

Sentence 2—"Cleans strainer and sediment bowl by removing foreign matter and wiping parts with rag."

The operation of cleaning the strainer is a routine one and is usually performed on all service calls even though it is the basic cause of non-functioning in less than 10% of the cases. Actually, cleaning is performed by washing in a solvent. The important thing in checking and cleaning the strainer is inspecting it to determine if it needs replacement.

Sentence 3—"Scrapes carbon deposits from inside of burner pot with a knife."

This step refers to one particular type of burner infrequently used in central heating plants. For the first nine months of 1950 this type of equipment accounted for less than 3% of central heating oilburner shipments.

Sentence 4—"Checks draft of flue by means of a draftstat and adjusts damper accordingly by adding or removing balance weight."

This is ambiguous since it is not clear whether "checks drafts" means that the serviceman examines the amount of draft, or the serviceman cuts down on the draft by adjusting the automatic draft regulator. Reference to adjusting the damper is incorrect since the damper must be removed or locked in place when a coal burning furnace is converted to oil; no damper exists in installations designed for oil.

A good, if relatively brief, definition would be the following: The oilburner serviceman responds to calls from homeowners, commercial establishments, industrial plants and other buildings such as hospitals, schools, etc., for the services of a mechanic to restore or correct malfunctioning of oilheating equipment used for heating or power purposes.

His first step is that of trained observer; he examines the equipment and mentally associates it with his knowledge of that particular type and make of unit. This requires familiarity with the whole range of equipment in use that differs in type, purpose, principles, manufacturer and model.

The next step is that of diagnostician. The serviceman must be able to analyze the reasons why a burner is not operating and begin checking those possibilities to isolate the source of trouble.

He must be capable of completely dismantling and reassembling any burner.

He must know electricity from the point of view of both the tradesman who runs the wires and conduits and the repairman who corrects troubles. He must understand the electrical system of all the controls (usually three) on an oilburner. Some controls are based on principles of electronics and he must know that field, too.

He must know the principles of electric motors, since that is the motive power of an oilburner. This includes practical experience with motors and the circumstances under which component parts may fail.

Must know heating Systems

Since the burner is related to the heating or power system, the serviceman must be famiilar with the three basic types of systems, water, steam and air and their individual principles and lines of distribution.

He must know all about fueloil, particularly the phases of refining and distribution that relate to the principles and characteristics of oilburning.

Following his diagnostic work, a serviceman must be able to repair or replace any circuit, line, pipe or piece of oilheating equipment that is the cause of non-functioning.

2. *Type of Industry and Service Rendered*

The Oilburner Serviceman operates in an industry that is often regarded as a utility without a franchise. In common with utilities that are responsible for heat and power, the oilburner dealer must be ready to furnish 24 hour service to his customers all year round. Almost all calls for oilburner service reflect an emergency—lack of heat, hot water or power. To the homeowner, the lack of heat or hot water is at least a severe discomfort, and under many circumstances, a threat to good health. To commercial establishments, failure of oilheat or hot water can affect its services and has importance to the extent the work of that business is important. The emergency nature of oilburner service in buildings such as hospitals and industrial plants is obvious.

Takes real Training

Within or without the industry, there is no substitute for Oilburner Servicemen. Skilled labor currently engaged in the manufacture of oilburners could not learn service work quicker than any other skilled group. Within the dealers' organization, there is no other group of skilled workers that could be trained for the job. The average dealer organization is small, employing principally clerical help, and outside of installation and servicemen, has a source of manpower only in fueloil truck drivers. Since the bulk of the fueloil is delivered during the winter months, this group is busiest when calls for service are most imperative.

3. *Hours of Training Required to Produce Acceptable Workers.*

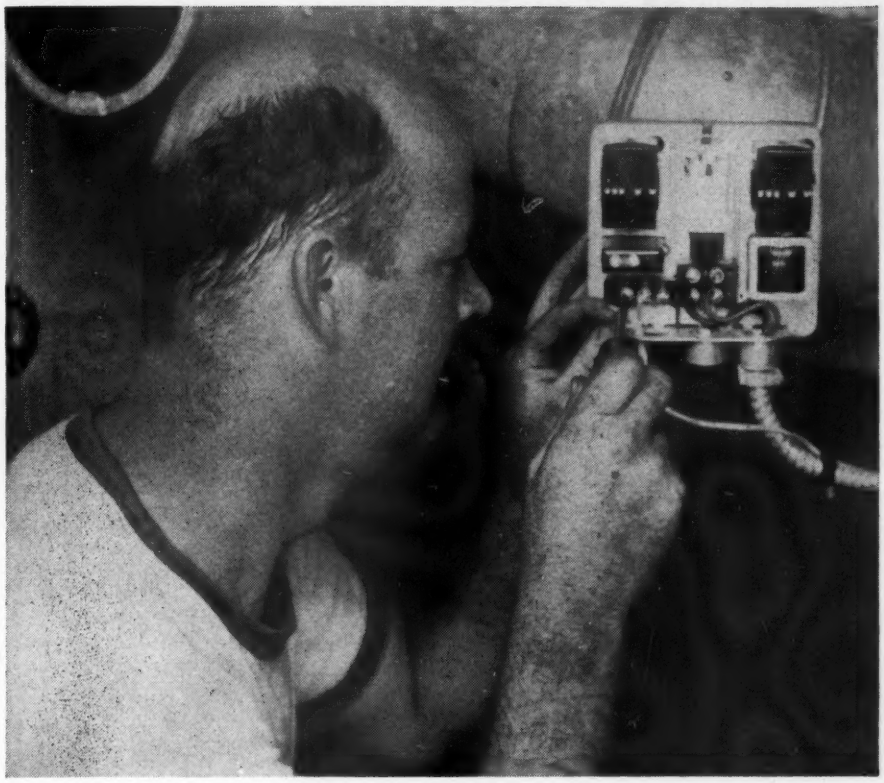
A survey of dealers on the hours of training required to produce acceptable workers indicated the time required as follows:

Less than 12 months	13.2%
12 to 17 months	24.6%
18 to 23 months	8.4%
24 to 29 months	27.6%
30 to 35 months	1.2%
36 to 41 months	21.3%
Over 42 months	3.6%
	99.9%

The median would seem to be about 24 months, since 53.7% indicated it would take 24 months or longer to train a serviceman.

3A. *Approximate Number of Workers Engaged in Occupation*

As of January 1st, 1951 there were about 13,400 Oilburner Servicemen in the industry. Over half of these



(54.7%) are with dealers who employ four or less servicemen, consequently such men have much greater relative value than would be the case if the typical dealer employed ten servicemen.

3B. *Age Distribution of Workers*

According to the survey, the age distribution of Oilburner Servicemen is as follows:

18 through 26 years	23.4%
27 through 35 years	40.0%
Over 35	36.6%

4. *Action Taken or Planned to Forestall Critical Shortage of Workers*

The rapid growth of the oilburner business since the end of the war has made the industry concentrate on utilizing all available trained workers, and training as many new ones as possible.

Use of Women:

98% of the industry considers women not suited for the job, and much of that opinion is based on experience during the last war. Women are not adaptable for many of the skills involved, such as electricity. Also, the job requires lifting heavy tools and heavy equipment that the average woman couldn't do, and grimy work that women would not care to do. The emergency nature of the work requires a serviceman to drive trucks in all weather conditions, and at all hours of the night, and that is not a job for a woman.

Use of Retired Workers:

96% of the industry feels there are no retired workers who could be used. Most point out that the industry is too young to have any retired workers. In addition, the strength and stamina required discourages men from staying in the job until retirement age.

Use of Physically Handicapped:

Currently, some physically handicapped workers are employed as Oilburner Servicemen, and more could be used, depending on the handicap. 47% of the industry feels that providing the handicapped worker could use his hands, drive a truck and had the stamina for the job, he could qualify for training.

Recruitment From Less Essential Activities:

84% of the industry does not believe that additional servicemen could be recruited from other activities. To the extent possible, dealers follow that practice now. The only source of manpower in less essential activities is clerical workers and truck drivers, and neither group is adaptable to training in the skills necessary.

Upgrading Qualified Workers:

The possibilities of upgrading workers depends upon the number of truck drivers who are able to learn the skills of an Oilburner Serviceman. Wherever possible, dealers use drivers in the slack delivery season on simple service such as annual cleaning and servicing. In a few cases, the drivers learn to become satisfactory Oilburner Servicemen through years of this apprentice work. However, experience indicates that drivers lack the interest to master electricity, heating systems, etc., and step up to a skilled trade.

Lengthening the Workweek:

The hours that an Oilburner Serviceman puts in are determined mainly by the demand for service, consequently, the workweek is very irregular. Where the worker is willing and unions permit it, a serviceman will be asked to work up to the level of endurance whenever the need arises. However, the urgent nature of a call for service requires the dealer to maintain adequate personnel so that service calls are not seriously delayed.

4A. *Reducing Need for Additional Trained Workers*

Oilburner service presents no opportunity to reduce the need for additional trained workers by simplifying the job, using workers full time at their highest skill or using labor saving machinery. Each service call is an individual job requiring as much skill in analysis as it does in work to correct the trouble. Tools play a relatively minor role. Since a breakdown is involved there is no chance for simplification. In addition, the nature of each job is unknown until an experienced man makes the analysis; there is no chance to use less experienced men efficiently.

4B. *Training Additional Workers*

Because the industry has been growing so rapidly since World War II, it has been doing everything possible to train additional servicemen. This is borne out by the fact that 41.7% of the dealers already have a procedure for hiring inexperienced, but qualified, men and training them to be satisfactory servicemen. The survey revealed the following reasons why more dealers didn't have such a program: dealer's business too small, nobody available to teach; draft has made it

impossible or inadvisable to hire qualified young men; some union contracts do not allow training of apprentices; equipment necessary for training in different types and make of burners not available to dealer; defense jobs make it difficult to attract apprentices.

Dealers have done much to provide the means for training new servicemen by establishing and cooperating with schools teaching oilburner service. The institutions on the attached list offer courses in oilburner service and help provide the fundamental instruction necessary. Graduates find ready places with dealers who continue their on-the-job training for a year or more until a satisfactory level of efficiency has been reached and the worker becomes self-reliant.

5. *Number of Hours in Average Workweek*

As previously noted, the workweek is very irregular. From the survey the following breakdown on hours was obtained:

less than 45 hours	11.3%
45-49 hours	25.6%
50-54 hours	34.0%
55-59 hours	11.0%
over 60 hours	18.0%
	99.9%

From a question in the survey on the number of additional hours that could be worked, the following breakdown was obtained:

none	30.9%
less than 4	4.1%
4-7	17.9%
8-10	34.5%
over 10	12.3%
	99.7%

Dealers whose servicemen are working less than fifty hours per week evidently feel that the workweek could be lengthened by eight or more hours. It is questionable whether servicemen would agree to the added hours and the matter of union regulations could not be ignored. Dealers whose men are now working in excess of fifty hours do not believe the workweek could be lengthened.

During each of the past two years the number of Burner Servicemen has decreased in relation to number of consumers served. For example, in 1948 there was one serviceman to each 302 oilheating users. In 1950 there was one to each 384 users. Before Korea skilled manpower had become an acute problem in the oilheating business.

Shelter and fuels are two of the necessaries in maintaining the health and morale of the civilian population. Oilheating serves more than one-quarter of the population. Oilburners in commerce and industry are vital to the development of the defense program and the supporting economy.

The industry respectfully urges that special consideration be given to the indispensable role played by the Oilburner Serviceman so that the public and industry will not suffer from failure of oilheating, hot water or power.

F. C. HAAB, National Chairman
Distribution Division
Oil-Heat Institute of America, Inc.

List of Schools and Colleges Offering Courses in Oilburner Service

Connecticut Tech. Institute, Inc.
Hartford, Conn.

Hartford Trade School
Hartford, Conn.

Technicians Training School for Oil Burner Mechanics
Boston, Mass.

Tufts College
Medford, Mass.

Vocational High School
New Bedford, Mass.

New England Technical Institute
Providence, R. I.

Oil-Heat Institute of New England
Boston, Mass.

Waltham Oil Burner School
Middleboro, Mass.

Massachusetts Trade School
Boston, Mass.

Wentworth Institute
Brockton, Mass.

Springfield Trade School
Springfield, Mass.

Chamberlain Vocational High School
Washington, D. C.

Veteran Trade School No. 253
Baltimore, Md.

Camden County Vocational School
Merchantville, N. J.

Essex County Adult Technical School
Newark, N. J.

Lincoln Technical Institute
Newark, N. J.

Alfred State Tech.
Alfred, N. Y.

East N. Y. Vocational High School
Brooklyn, N. Y.

Brooklyn YMCA Trade School
Brooklyn, N. Y.

Long Island Agric. & Tech. Inst.
Farmingdale, N. Y.

N. Y. Technical Institute
New York, N. Y.

YMCA Trade & Technical School
New York, N. Y.

Modern School of Mechanics
Philadelphia, Pa.

Murrell Dobbins Vocational Tech. School
Philadelphia, Pa.

Phila. Wireless Technical Inst.
Philadelphia, Pa.

Brooklyn Evening Tech. High School
Brooklyn, N. Y.

Albany Public Night School System
Albany, New York

Hackensack Vocational School
Hackensack, N. J.

Baltimore City Vocational School
Baltimore, Md.

Rochester Institute of Technology
Rochester, N. Y.

Brown Vocational School
Wilmington, Del.

Boch Vocational School
Philadelphia, Pa.

Virginia Mechanics Institute
Richmond, Virginia

Air Conditioning & Refrigertaion Institute, Inc.
Baltimore, Md.

Newark Vocational School
Newark, N. J.

Philip Schuyler High School
Albany, N. Y.

State University of New York, Institute of Applied Arts & Sciences
Buffalo, N. Y.

Chicago Technical College
Chicago 16, Ill.

Industrial Training Institute
Chicago, Ill.

Cass Technical High School
Detroit, Michigan

Michigan School of Trades, Inc.
Detroit, Michigan

St. Paul Vocational School
Saint Paul, Minn.

The David Ranken Jr. School of Mechanical Trades
St. Louis, Missouri

Milwaukee School of Engineering
Milwaukee, Wisconsin

Dunwoody Industrial Institute
Minneapolis, Minn.

Milwaukee Vocational School
Milwaukee, Wisconsin

Omaha University
Omaha, Nebraska

Washburn Trade School
Chicago, Illinois

Commercial Trades Institute
Chicago, Illinois

Edison Technical School
Seattle, Wash.

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OHI Directors study Defense

THE DIRECTORS of the Oil-Heat Institute of America were guests of the Rochester, New York, chapter on January 9, conducting their regular quarterly meeting in that city. The sessions were headed by A. T. Atwill, president and Ralph Becker, managing director of the Institute.

The more significant discussions revolved around the possible effects on the industry of the defense production program and the industry's competitive position with natural gas.

In establishing the industry's position for 1950, the directors estimated that there were about 900,000 domestice oilburners and units shipped by manufacturers, and about 50,000 commercial oilburners, these latter including both residual oilburners and those using distillate fuels where the firing rate was above 6 gph.

The question arose as to the Institute's activity in assisting local chapters in their programs to counteract gas competition. It was explained that direct help has been given in a few cities, mostly along the line of getting some cooperation from major oil companies on the promotional budgets. After getting from local sources all of the necessary facts and figures the Institute undertakes to "certify" the area to the interested majors and in turn solicits their help.

It was voted to continue the Institute bulletins that have been mailed weekly to members, but to place them on an indefinite time basis, to be issued whenever there is interesting and useful information to convey. The directors voted not to increase the membership dues at this time, even though operating costs have been rising. They felt that in a period of uncertainty caused by the defense program there would be a tendency for more companies to join the Institute and that this was no time to raise the question of dues so long as the group had a surplus.

Don Leslie, reporting for the Accessory Div., stated that this group plans another industry luncheon with a prominent speaker at the Chicago convention in April, as they did last year in Philadelphia. Ted Kaufman of OHI, for the Engineering Committee, told about progress on the new "Handbook of Oilburning," that it will be ready for sale at the Chicago convention, and that 364 advance orders have already been received. Fred Haab, for the Distribution Div., described the manpower studies being made under the direction of William Spiess to supply information requested by the Inter-Agency Committee on Manpower in Washington. A brief has been submitted to this

O.H.I. GOVERNMENT COMMITTEE FOR OIL HEATING

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Crane Company—J. H. Geiss

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J. R. Sherwood—Sherwood Brothers, Inc., Baltimore, Md.
C. C. Jonswold—Arrow Petroleum Company, Forest Park, Ill.
E. F. Marquard—Allied Oil Company, Inc., Cleveland, Ohio
Clarence Lucas—Stark Oil Company, Baltimore, Md.
M. N. Vining—Diesel Oil Sales Company, Seattle, Wash.
C. R. Holloway, Jr.—Liberty Fuel & Ice Company, Portland, Oregon
J. W. Warner—J. P. Agnew & Company, Inc., Washington, D. C.
W. F. Schierholz—Fuel Oil Company of St. Louis, St. Louis, Mo.
H. M. Spade—Robison Oil Company, Hartsdale, N. Y.
F. C. Haab—F. C. Haab Company, Philadelphia, Pa.
George Clement—Modern Heat & Fuel Company, Philadelphia, Pa.
W. F. Briggs—Valley Oil Company, Inc., Middletown, Conn.

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Lawrence Davis—Automatic Oil Heating Company, Springfield, Mass.
Harry B. Hilts—Empire State Petroleum Association, New York City
Al Baerenklau—Baerenklau & Company, Brooklyn, N. Y.
Harvey Lewis—Lewis Coal & Oil Company, Port Washington, N. Y.
H. F. Horning—Northwest Petroleum Association, Minneapolis, Minn.

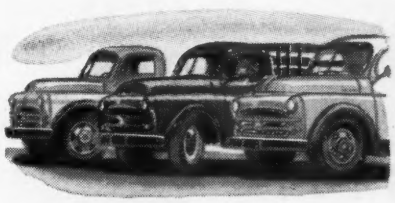
Counsel—G. B. Ferris—McLean, Ferris, Ely & Fain, New York

ANNOUNCING!

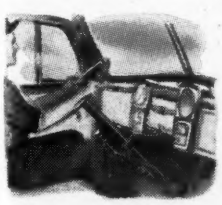
NEW DODGE "Job-Rated" TRUCKS

The trucks that do the most for you!

NEW Greater Power! Eight engines—with horsepower increases as high as 20%. You'll enjoy the *right power* for your job! *With all their extra value, Dodge "Job-Rated" Trucks are priced with the lowest!*

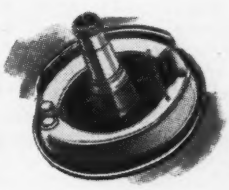


NEW Easier Handling! Now, even sharper turning! More comfortable steering angle and easier-operating new worm-and-roller steering gears! You also get such proved features as cross-steering, wide front tread, short wheelbase.



NEW Interiors! Striking new, massive appearance—inside and out! Lower hood line for better visibility. Attractive two-tone cab interiors. New clear-vision instrument panel. New seat comfort.

NEW Extra Quiet Brakes! Another Dodge "first"! Molded, tapered Cyclebond brake lining. Practically eliminates squeal and grab. Extra-smooth, positive action. Extra-long life. Standard on trucks 1½-ton and up, except air brake models.



MORE THAN 50 BRAND-NEW IMPROVEMENTS . . . INCLUDING

- NEW! SMOOTHER RIDE
- NEW! EASIER LOADING
- NEW! EASIER BAD-WEATHER STARTING
- NEW! GREATER ELECTRICAL CAPACITY
- NEW! EASIER-TO-READ INSTRUMENTS
- NEW! BETTER VISIBILITY IN BAD WEATHER
- NEW! MORE EFFICIENT FUEL PUMP

ANOTHER DODGE EXCLUSIVE! gýrol fluid drive now available on ½-, ¾-, and 1-ton models.

See the NEW **DODGE "Job-Rated" TRUCKS** on display at your dealer's **SATURDAY, FEBRUARY 10th**

Fueloil & oil heat

Committee, setting forth the case for oilburner mechanics.

T. A. Crawford, chairman of the Public Relations Committee, first noted that Lon Casler is to be vice-chairman. Then he discussed the point that Canadian manufacturers of oilburners were about to set up their own Institute in a meeting at Toronto, and that OHI cooperation had been suggested. C. E. Lewis, Perfex Corp., recommended that the Distribution Div. and the Engineering Committee make a study of fueloil rationing in the last war and be prepared with suggestions for improvement in case this facility should again be activated.

In going over the Institute's activities on gas competition, the Public Relations Committee suggested that major advertising efforts be devoted principally to areas where oil and gas had reasonably similar fuel costs, and lesser efforts in areas where fueloil has a serious cost handicap. This brought the suggestion that the largest share of promotional costs need come from fueloil marketers in individual cities, since they were in position to be hurt most. The conclusion of the meetnig was that oilheating should be promoted unitedly in all parts of the country where local dealers were inclined to be active in this line, even though gas was not an immediate threat.

The most important single activity of the meeting was the appointment of an over-all industry committee to work with Government as problems may arise. There were 57 members appointed, at all levels of the industry. They will not at any time function as a single committee, but rather they constitute a reservoir from which specific task committees may be assigned for individual undertakings.

Pacemaker for Profits . . . from Expert Heating Service

Making the most of your ability to do an expert tune-up job will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown here contains precision-made quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, checking a burner for wornout parts and needed repairs, or running an efficiency test to close a replacement deal.

The kit contains the well-known FYRITE CO_2 Indicator, the versatile MZF Draft Gauge, the all-metal TEMPOINT Stack Thermometer and the sensationally new TRUE-SPOT Smoke Tester. Now, for the first time you can adjust an oil burner quickly and expertly for highest CO_2 without objectionable smoke . . . do away with guesswork, and "hit and miss" fumbling in adjusting for clean firing. The "Scale of Soot" which comes with the TRUE-SPOT tells you the limits of permissible smoke for various burners and types of heating systems. This amazingly simple method of oil burner adjustment is the greatest advance in combustion testing since the introduction of the FYRITE CO_2 Indicator.

Ask your Jobber for the FYRITE Utility Kit or write for Bulletin 777

BACHARACH INDUSTRIAL INSTRUMENT CO.

7000 BENNETT STREET · PITTSBURGH 8, PA.

Gas heat Manufacturers Estimate 1951 Volume

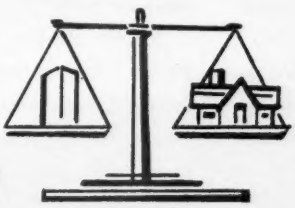
MANUFACTURERS of gas central heating equipment expect sales of their products in 1951 to be 22% below 1950. This is a composite opinion of 50 manufacturers surveyed by the Gas Appliance Manufacturers Assn., New York. Those 50 compaines do about 52% of the industry's volume.

Companies accounting for 17% of the volume in the group expect their sales to be above 1950, ranging from 6% to 200% up. The larger group of companies, representing 74% of the volume, expect sales to be down anywhere from 10% to 50%. The smallest group, accounting for 9% of the volume, expect their sales to be about the same as in 1950.

Advertising and promotional activities of these manufacturers will be a little greater than in 1950. Planning to increase their outlays for these purposes are manufacturers representing 39% of the total output. They will spend anywhere from 10% to 80% more. The second segment, accounting for 14% of the volume, will spend less in 1951, ranging from 15% to 50% less. The third segment, planning to spend the same as in 1950, represent 47% of the total production.

Asked what part of their facilities they plan to convert to defense production in 1951, the weighted average is 33%. Nine out of ten manufacturers in the group will take on defense work; the other tenth will not.

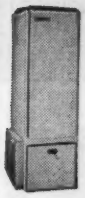
SELL THE *Balanced Line* OF HEATING EQUIPMENT—



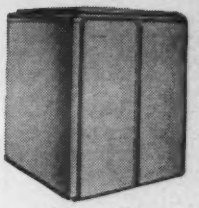
Luxaire®

ANY SIZE • ANY TYPE ANY FUEL

Series A Gas-Fired Steel Air Conditioning Unit.



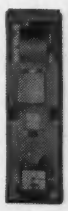
Series H Gas-Fired, Steel Utility Air Conditioning Unit.



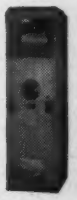
Series CA Gas-Fired Air Conditioning Unit, Cast Iron heating element.

Series G Gas-Fired Gravity Furnace Available with Steel or Cast Iron Heating Element.

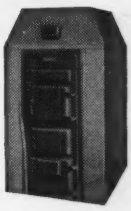
Series O Gun, Oil-Fired Air Conditioning Unit. Steel heating element.



No. HC-95-E Gas Counterflow Unit, for Slab Floor, Perimeter Heating.

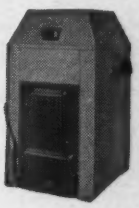


No. VHC-75-E Oil Counterflow Unit, for Slab Floor, Perimeter Heating.



Series No. 700 Coal-Fired Gravity Furnace. Steel heating element.

Series AC-F Coal-Fired Air Conditioning Unit. Steel Heating Element.



Series C Coal-Fired, Cast Iron Furnace.

For Gravity Installations
For Forced Air Installations
For Perimeter Heating
For GAS . . . OIL . . . COAL
With Cast Iron Heating Elements
With Steel Heating Elements

AND HERE'S A MOST IMPORTANT FEATURE THAT MAKES *Luxaire* THE OUTSTANDING LINE OF HEATING EQUIPMENT

Most Luxaire Gas Fired Units are readily converted to Oil Fired Units by substituting the Luxaire Oil Burner.

Also—Luxaire Oil Fired Units can be converted to an A.G.A. approved Gas Fired Unit by substituting the Luxaire Gas Burner.

Yes — with Luxaire you really have the balanced line of heating equipment. The line that will meet the demands of practically any heating specifications.

Colorful Luxaire catalogs . . . dealer selling and sales promotion helps are available for you at your nearest Luxaire jobber.

THE *Luxaire* C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

HEATING & AIR CONDITIONING UNITS

fuel oil heat

OHI convention Program To present industry's Plans

THE 28TH ANNUAL CONVENTION, and concurrent 19th oilheat exposition, being held by the Oil-Heat Institute of America, Inc., April 2 to 6 at Chicago's Navy Pier, is the logical time and place, says A. T. Atwill, president, "for the presentation of our industry's plans to assure full cooperation in the defense effort while making clear our intention to receive equitable treatment in the mobilization program."

He urged all members of the industry, oilburner and fueloil dealers, equipment manufacturers and distributors, to attend the sessions, if possible. Elaborating, he pointed out that those who do not participate in the formation of the policies at this convention under which the industry may have to function for the next five or ten years, "not only fail in their duty to their business, but can only blame themselves if the decisions made do not reflect their views.

"A very substantial part of the convention business sessions are being scheduled to help the industry's grassroots representatives—the dealers—meet the critical situation ahead and to help them interpret our industry's policies to their customers and friends at the local level."

Even though there are no government orders in effect at this moment drastically curtailing or interfering with oilheating equipment manufacturing, Mr. Atwill said, experience during World War II recommends the wisdom of acting promptly. He echoed the opinion expressed by many industrial and economic experts that the virtually complete shut-down of oilheating equipment manufacturing during World War II was unjustified and inequitable. "We must assure ourselves," Mr. Atwill continued, "that the present mobilization program will not single out our industry for less than fair treatment.

"At the 1951 Convention sessions in Chicago we must forge a program that is forceful yet sufficiently flexible to operate under the many varying conditions in which we may find ourselves. To map such a program requires the fullest participation of every man in our industry. The minor cost of attending the Convention this year may well repay you 1000 times over in the next year or two."

Ralph Becker, OHI managing director, has reported that exhibition space reservations were being received at an even higher level than they were at a similar time for the record-breaking event in Phildelphia last year. He attributes this interest in large part to the pressing material and manpower problems facing the industry. "We have had our share of problems these last few years," explained Mr. Becker, "and getting together and discussing them always has been of great interest to everyone in this vitally essential in-

The Bethlehem Crusade-a-therm

FIRST CHOICE FOR DEPENDABILITY with thousands of home owners!

People are amazed at how clean their homes are after they install a CRUSADE-A-THERM. Furnace soot and smoke just can't form with this modern, efficient oil heating unit. And tell-tale odor is eliminated as well. The Bethlehem CRUSADE-A-THERM is made for the average size home. From one handsome, compact package you get an automatic source of dependable clean heat and all the hot water you want, all year, at Low Cost! It's tomorrow's heating plant—today!

MEMBER OHI OIL-HEAT INSTITUTE OF AMERICA

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

A few exclusive Bethlehem Crusade-a-therm territory Franchises are still available. Wire or write immediately for full information.

"JEFFERSON" on TRANSFORMERS

IS LIKE

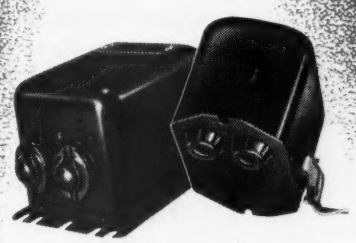
"STERLING" on SILVER

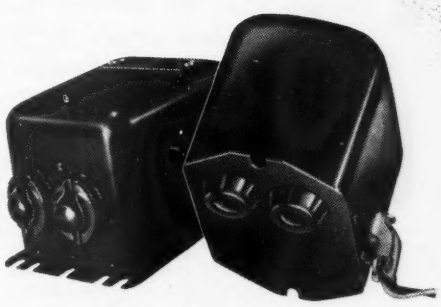
Both are Marks of Uncompromising Quality

Down through the years, "Sterling" on silver has become well known as the mark denoting skilled craftsmanship and superior materials.

Similarly, the name "Jefferson" on transformers has become well known and accepted for over a quarter of a century. The Jefferson name means "Quality with Quantity" production—expert engineering and design, the highest grade of materials, and skilled craftsmanship throughout every step of manufacture.

These high standards are reflected in the outstanding performance, economy, and long service-free life that Jefferson Transformers provide.





JEFFERSON ELECTRIC COMPANY, Bellwood, Illinois

In Canada: **Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.**

fueloil & oil heat

dustry. The year 1951, perhaps more than ever before, will be a time for thorough discussion and analysis of our business and what is ahead of us in these critical times and convention sessions have been planned to this end."

In addition, he continued, many companies which have introduced new products or re-designed old models since last year's exposition will display them. The exposition will be held at the Navy Pier, Chicago, with business sessions conducted at the Palmer House.

Two subcommittees were immediately appointed, the first to work with NPA, as an industry advisory council in the Heating Section of the Construction Materials Div.

This council will be appointed by the Office of Industry Advisory Committees, N.P.A., and its membership may or may not follow exactly the list recommended by OHI. When final appointment is made, we will publish the list. The men were selected in such a way as to give proper weight to five industry influences, company size, geographic area, geenral type of burners made, marketing methods and membership (or not) in OHI.

One other special subcommittee appointed immediately after the meeting is to work with the Petroleum Administration for Defense. The three members are Lon Casler, chairman, John R. Sherwood and Fred C. Haab.

The next meeting of the directors will be at Chicago April 2.

❖

U. S. Department of Labor Fueloil Prices (November)

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken November 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	14.73	14.57	12.50	..
Manchester	15.30	14.80	13.20	..
Portland, Me.	14.40	14.40	12.40	..
[3] Buffalo	14.95	..	13.74	13.74
[1] New York	..	..	12.61	..
Philadelphia	..	13.43	12.20	..
[1] Chicago	14.32	13.97	13.06	13.06
[4] Detroit	..	14.81	13.78	..
Milwaukee	..	14.54	13.60	13.50
[1] Kansas City	..	12.37	11.39	11.22
Minneapolis	14.97	14.73	13.68	13.73
[1] Baltimore	..	13.36	12.44	..
[1] Wash., D. C.	..	13.84	12.85	..
Jacksonville	..	14.67	13.30	..
Norfolk	..	13.60	12.20	12.20
Richmond	..	14.00	12.60	..
[2] Savannah	..	16.00	13.50	..
[5] New Orleans	..	14.33	12.77	12.77
Portland, Ore.	..	14.34	12.08	6.55
[6] San Francisco	..	13.84	11.51	6.48
[4] Seattle	..	15.35	13.14	6.74

[1] Prices include 2 percent tax.
[2] Inspection tax of one cent per gallon included on kerosene only.
[3] Prices include 1 percent tax.
[4] Prices include 3 percent tax.
[5] Prices include 3 percent tax on all fuels except gas; prices for kerosene and fueloil No. 1 also include one cent per gallon State health tax, and 1/32 of one cent per gallon State inspection tax.
[6] Prices include 3.5 percent tax on all fuels except gas.

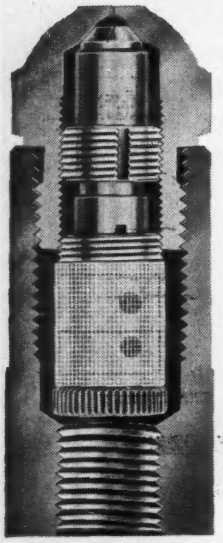
❖

John D. Gill, economist and director, Atlantic Refining Co., Philadelphia, Pa., retired on January 1. He had been with the company since 1912, first as a lubrication research engineer. In 1928 he headed the Economics Dept. and in 1931 was elected to the board of directors, on which he served until his retirement.

The Sign of STEINEN Perfection

STEINEN

NOZZLES



NOZZLES
NOZZLE KITS
ADAPTERS
INSPECTION MIRRORS
AIR BANDS

The Sign of STEINEN Perfection

WM. STEINEN MFG. CO.
43 BRUEN ST. • NEWARK 5, N. J.
Screw Machine Products • Stampings
Assemblies • Oil Burner Accessories

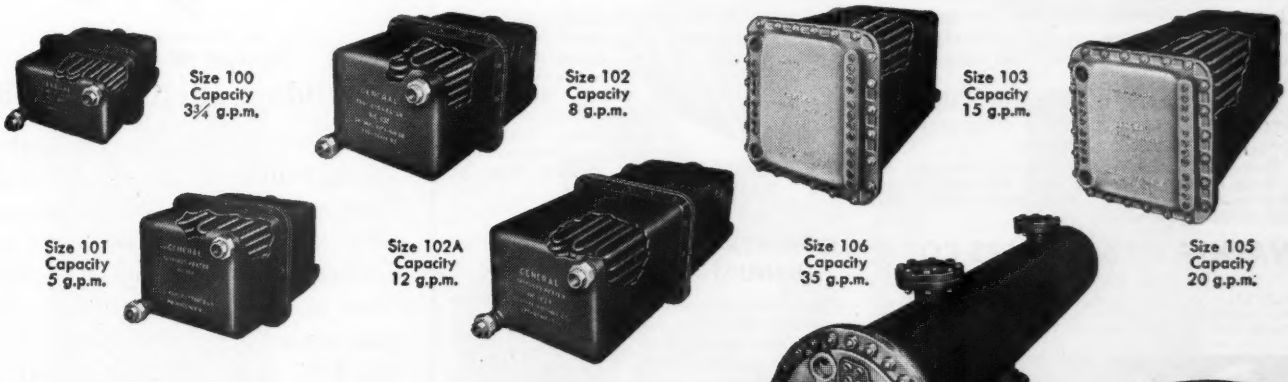
MEET HOT WATER NEEDS... BETTER

with GENERAL Tankless Heaters

You can offer customers a big advantage over built-in water heating units or other makes of tankless heaters when you sell GENERAL Tankless Heaters. Only GENERAL has the wide range of capacities needed to supply exactly the right size for each job. The complete line contains eight sizes, with capacities from 3¾ to 35 g.p.m.

GENERAL Tankless Heaters are designed for all automatic-fired boilers. Require no gas or electric connections . . . no storage tank or complicated piping. Especially advantageous on forced hot water heating systems because circulation is faster . . . operation is more efficient. And they give contractors quicker profit by saving installation time!

Get full information on the complete line of General Tankless Heaters. Write for Catalog 19A. General Fittings Co., 125 Georgia Avenue, Providence, Rhode Island.


Size 100 Capacity 3¾ g.p.m.
Size 102 Capacity 8 g.p.m.
Size 103 Capacity 15 g.p.m.
Size 101 Capacity 5 g.p.m.
Size 102A Capacity 12 g.p.m.
Size 106 Capacity 35 g.p.m.
Size 105 Capacity 20 g.p.m.

GENERAL

TANKLESS AND INDIRECT
WATER HEATERS AND HEATING SPECIALTIES

NEW GENERAL 500 ALL-COPPER UNIT

Family-size tankless heater that weighs less than 1/3 as much as conventional tankless heaters. Non-corroding copper shell, insulated with fiberglass. Seamless copper tubing. Easily drained. Capacity 4 g.p.m.

American Home panel Queried on Heating

THE AMERICAN HOME magazine in Report #25 has issued a summary of replies to questionnaires sent to 2,100 members of its Reader-Consumer Panel. Replies were received from 1,695 members, or 80.7%.

The Panel consists of subscribers representing all 48 States and the District of Columbia, who have been enlisted as "consumer-advisers" and who have pledged to answer questionnaires relating to consumer opinions, preferences and buying plans. The Panel as presently constituted is a cross-section of *The American Home's* circulation, both by States and population groups.

Included in the questionnaire from which Report #25 was compiled was the question, "What type of heating does your home have?" Thirty-nine per cent of the respondents answered forced warm air, 13.8% gravity warm air, 12.8% steam, 11.6% forced hot water, 5.3% gravity hot water, 2.6% radiant panel, 1.2% vapor vacuum, 7.8% floor furnace and 5.9% did not answer.

The next question asked if there was any complaint about the method of heating reported. These are the answers:

	Yes	*No*	*No Answer*
Forced warm air	26.6%	60.7%	14.7%
Gravity warm air	37.4	52.9	9.7
Steam	36.2	54.3	9.5
Forced hot water	15.8	72.6	11.6
Gravity hot water	20.7	66.7	12.6
Radiant panel	20.5	59.0	20.5
Vapor vacuum	36.8	47.4	15.8
Floor furnace	27.3	42.2	30.5

A tabulation of complaints showed a variety of objections, including "Dirty, dusty, discolors walls, leaks smoke" checked by 12.8% of forced warm air furnace users, 15% of gravity warm air users and 10.5% of owners of vapor vacuum systems. Next most common complaint was against "Uneven heat, intervals of cold, drafty," the lament of 15% of gravity warm air users responding, 12.9% of steam users and 15.8% of respondents with vapor vacuum heating systems. Eleven per cent of those who owned floor furnaces said the heat was too dry. Other complaints, reported by varying numbers of those answering the questionnaire, said their heating systems were too slow, took too much wall space (this about radiators), too expensive, too noisy and too much heat which could not be controlled effectively.

❖

F. W. Dodge reports Building up 40% in 1950

FINAL FIGURE for construction outlays during 1950 in the 37 states east of the Rockies was $14,501,055,000, an even 40% increase over 1949 figures, according to F. W. Dodge Corp., New York 18, N. Y. Strongest comparative gain was registered in residential work, up 59% over 1949 to a total of $6,741,028,000, with non-residential awards last year increasing 42% to $5,181,595,000. Public and private works and utilities gained 4% over 1949.

December construction awards, reported by Dodge, totalled $1,168,432,000, 7% higher than November and 26% over December 1949. Of this total, residential awards accounted for $478,583,000, 4% less than Novem-

Amazing New Improved
WALKER
DRAFT REGULATOR
SAVES UP TO 25%
on All Types of Fuel—COAL, GAS & OIL!

TYPE 34C for space heaters, water heaters, and stoves.

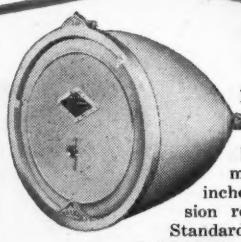
NEW BOX HINGE IS FRICTION FREE
Seals bearing points from soot, moisture and rust. Won't clog or stick. Maintains positive draft values exactly as adjusted.

Over 7 million now in use!

Yes, now you can save up to one-fourth on fuel cost and get *more* efficient heating performance. The new, improved, automatic Walker Draft Regulator assures maximum fuel combustion under *all* stack conditions. This means *even* heating and prevents unnecessary heat loss up the chimney. It's quickly installed, easily adjusted, and low in cost.

Manufacturers can improve the performance of their heating equipment by specifying Walker Controls.

There's a Walker Regulator to fill every need, too ... from a small stove to a giant industrial boiler. Each is factory tested ... each guaranteed to give positive automatic action.



WALKER TYPE 34

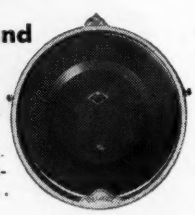
For any type of domestic furnace in stores, small office buildings and apartments. Sizes 6-20 inches. Rust and corrosion resistant. Listed as Standard by Underwriter's Laboratories. Shown with installation collar.

WALKER MFG. & SALES CORP.
St. Joseph, Mo.

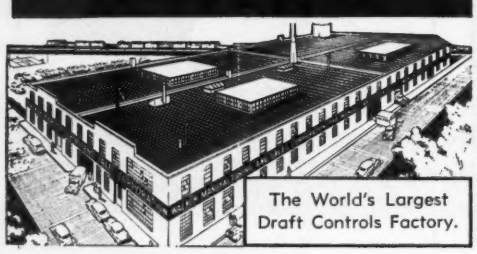
World's largest factory producing Automatic Draft Regulators exclusively ... not competing either directly or indirectly with producers of any type heating equipment.

COMMERCIAL and INDUSTRIAL

(Ball Bearing) Built to meet toughest conditions. Sizes 16-36 inches. Ideal for power plants, schools, garages, industrial plants, laundries... Thousands in use!



WALKER Automatic DRAFT REGULATORS



The World's Largest Draft Controls Factory.

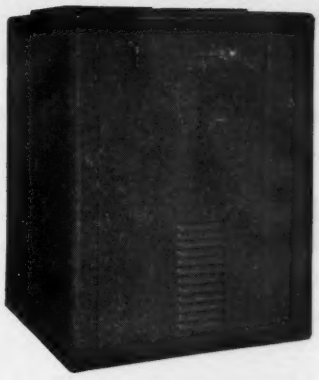
Walker Manufacturing & Sales Corp.
17th & Penn St., Dept. 205,
St. Joseph, Mo.

Please send me more information on the full line of Walker Automatic Draft Regulators. No obligation, of course!

Name_____
Firm_____
Address_____
City_____ St._____

Tripl-ife Flo-Warm Furnace

Gas Forced Air Flo-Warm Furnace

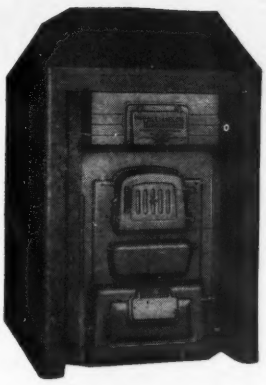


Oil De-luxe Flo-Warm Furnace

THE WILLIAMSON HEATER COMPANY

Complete Line

WARM AIR HEATING and WINTER AIR CONDITIONING



Tripl-ife Square Cased Gravity Furnace

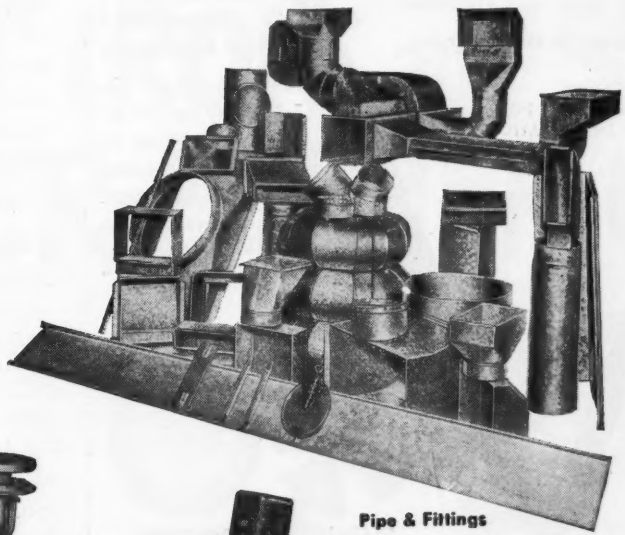
"Heat to your heart's content"

Gas, Oil, or Coal—there is a Williamson Warm Air Furnace for any size installation. Beautifully styled, built for life-time service, and designed for fuel economy, the models shown represent 60 years of research—and dealer satisfaction. For greater sales, easier installations, more enthusiastic customers and bigger profits investigate the Williamson Complete Line. Write for details—

THE WILLIAMSON HEATER COMPANY
Dept. FO, 4558 Marburg Ave.
Cincinnati 9, Ohio

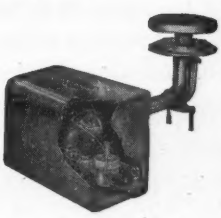
Tripl-ife Round Cased

Gas Gravity Furnace

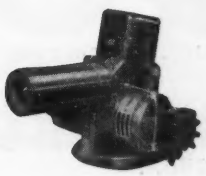


Pipe & Fittings

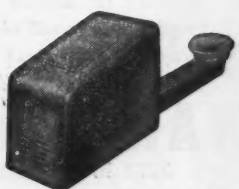
Oil Hi-Boy Furnace



Gas Burner



Oil Burner



Stoker

fuel oil & oil heat

ber, but 14% up from December 1949. Non-residential December awards were $490,375,000, up 62% from 1949; public and private works and utilities aggregated $199,474,000, 4% under 1949.

Comparison of fourteen Market Areas published

THE MILWAUKEE JOURNAL has tabulated and published a "Fourteen Market Comparison of Consumer Preferences," embodying the results of its own survey and those made by 13 other newspapers. The tabulation represents a digest of product use and brand preferences for 131 classifications in a total of 50 cities.

Presented are data for 14 marketing areas, the original surveys for which 44,200 representative families furnished consumer preferences. Figures in all cases are for 1950, excepting Birmingham which uses late 1949 information.

Ten of the newspapers included a question on which type of fuel is used. The tabulation lists the following information on homeheating in the indicated cities and surrounding market area:

	HOMEHEATING		
	Coal or Coke	*Fueloil*	*Gas*
Milwaukee	70.7%	25.2%	4.8%
Indianapolis	68.6	25.4	5.5
Columbus	52.4	2.9	44.7
Omaha	45.0	26.8	28.2
Birmingham	63.8	6.4	30.0
Salt Lake City	35.9	4.3	59.2
Fresno	*	4.8	85.4
Modesto	*	2.5	95.9
Sacramento	*	5.1	93.8
Seattle	20.4	74.6	3.4

*Not covered in this market.

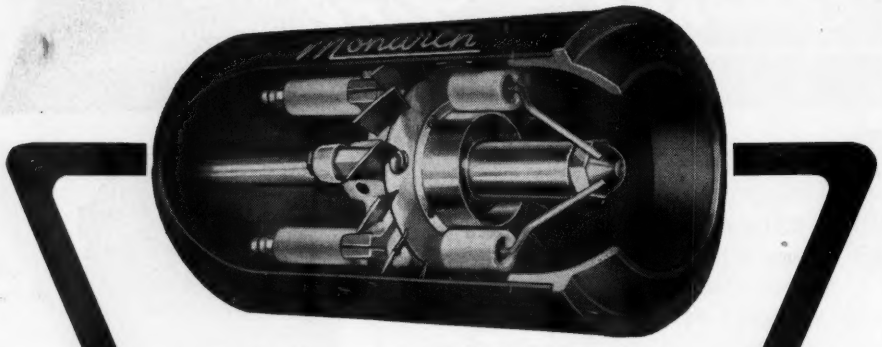
❖

William S. Lowe, executive vice president, A. P. Green Fire Brick Co., Mexico, Mo., since August 1949, has been elected president of the company. He succeeds Robert S. Green, son of the founder, who resigned recently, but who will continue as a member of the Board of Directors. A. P. Green, who founded the company in 1910, continues as Chairman of the Board. Before joining the Green company Mr. Lowe was with General Electric Co. for 8 years in various capacities up to division superintendent at their Bridgeport, Conn. plant; from 1942 to 1944 served as assistant to the vice president of manufacturing, SKF Industries, Philadelphia. From 1944 to 1949 he was chairman of the board and president, Winsted Hardware Mfg. Co., chairman of the executive committee, director and treasurer, American Transformer Co. and vice president, Waring Products Corp.

George F. Meyer, 83, president, F. Meyer & Brother Co. and former president, Meyer Furnace Co., both Peoria, Ill., died on January 11. He had been associated with the heating, sheet metal and hardware industries for his entire business career, was one of the founders of the Meyer Furnace Co. and also of Victor Foundry Co. Surviving are his wife; two sons, Frank L. Meyer, president, Meyer Furnace Co. and George F. Meyer, Jr., vice-president, F. Meyer & Brother Co., two sisters and seven grandchildren.

.....MONARCH.....

Investigate THE NEW G81 COMBUSTION HEAD



The new G81 combustion head will produce just as high combustion efficiency as the G74 head and will burn from .60 to 2.00 gph.

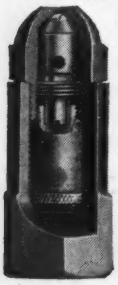
"PLUS" FEATURES OVER THE G74

- Costs half as much.
- As easy to install as an ordinary air cone and stabilizer.
- Simpler in construction.

WRITE FOR INFORMATION

MONARCH BURNER NOZZLES Preferred Because:

1. Each nozzle is individually tested and checked for capacity against the flow of a calibrated master sample. Capacity tolerances are as low as plus or minus 2½%.

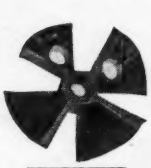


2. Standard nozzles will fire most gun type high pressure burners satisfactorily. (Special series are also available for burners requiring specified spray characteristics.)

MONARCH Air Cones And Stabilizers Have Proved Their Superiority

Best results are obtained by use of air cone and stabilizer together. Many manufacturers use this equipment. Pulsation can usually be overcome by using our recommended "Anti-Pulsation" equipment.

Write for circular No. 62250



STABILIZER

AIR CONE

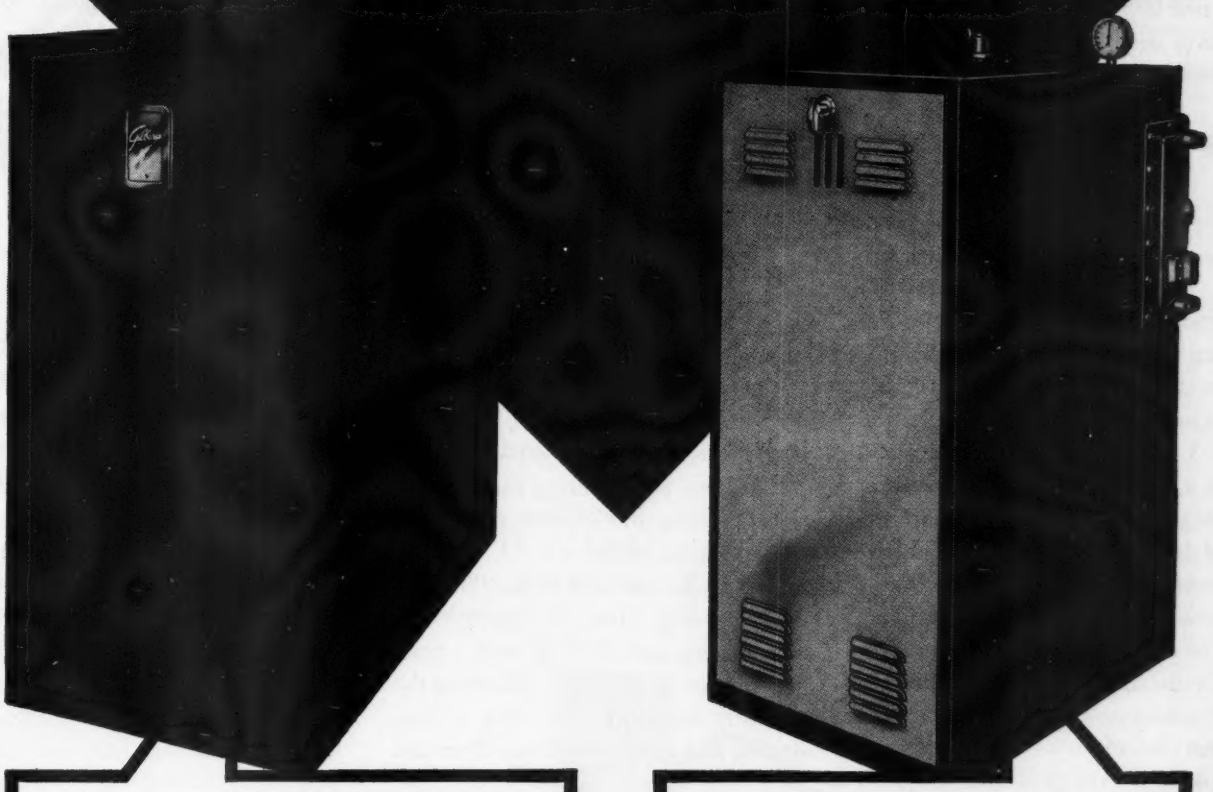
Write for Catalogue D

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST., PHILADELPHIA 34, PENNA.

European Distributor: A. Coutau, Rue de la Scie No. 16, Geneva, Switzerland

TURN THE HEAT ON SALES...



Smartly styled, compact steel boiler-burner units

- Welded alloy steel boilers.
- Priced to appeal to cost-conscious prospects.
- Packaged units, factory engineered and assembled.

High-efficiency cast iron boiler-burner units

- Long lasting, economical.
- Heat-trap type flues give outstandingly efficient operation.
- Easy to assemble and inexpensive to install.

AVAILABLE IN FOUR SIZES

FEATURE fast-selling, fuel-saving CAST IRON and STEEL BOILER-BURNER UNITS

DEALERS! Here are two modern, compact, efficient oil-fired boiler-burner units... with ALL the money-saving features that beat competition in today's market... built-in hot water heaters... fibre-glass insulation... exclusive Economy Clutch Burners. You're ready for *any* household boiler job when you handle the Gilbarco line!

DON'T DELAY — WRITE, WIRE, OR PHONE TODAY FOR FULL INFORMATION

Gilbarco

THE BURNERS WITH THE ECONOMY CLUTCH

Gilbert & Barker Manufacturing Company
West Springfield, Mass.—Toronto, Canada

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

Plans progressing for Pacific Coast Meeting

FINAL PLANS for the complete program of the Pacific Coast Conference are being formulated according to Bill Alexander, manager, Oregon Heating Industries, Portland 4, Ore., hosts for the meeting. The two day gathering will take place at Portland on March 2 and 3 at the Multnomah Hotel and will be a combined meeting for Oregon and Washington. Dealers also are expected from British Columbia, Idaho and northern California. The list of speakers is being selected especially so that the subjects will be of general interest reflecting domestic and international situations as they will affect the business outlook.

On March 2 the Oregon Heating Industries will open a headquarters room, featuring some equipment displays to give out-of-town dealers an opportunity to secure technical information on specific products. On the morning of March 3 four panels will be conducted, discussing trucks and equipment, credit, dispatching and degree day deliveries and oilburners. Following a luncheon at noon there will be an afternoon session, with cocktails and dinner the last items on the program.

OHOT holds Open House During Heating Exposition

AT A MEMBERSHIP MEETING held January 11 at Boro Lounge, Kew Gardens, N. Y., Oil Heat Old Timers, Inc., Long Island City 1, N. Y., completed plans for an open house during the International Heating and Ventilating Exposition in Philadelphia.

The frolic was held in the Philadelphia Sheraton Hotel on January 24, commencing at 6:30 P.M. with a roast beef dinner. Immediately following the members joined in an evening of fun, singing and good fellowship. Beer and refreshments were served.

Credit Talk heard by Massachusetts Dealers

THE REGULAR monthly dinner meeting of the Massachusetts Oil Heating Association, Inc., Boston, Mass., was held on January 16 at the Hampton Court Hotel. This 175th meeting of the group featured a talk by Thomas Fitzpatrick, president of the Merchants Reporting Service. His subject covered "Credit and Collection Prospects for 1951," particularly as they will apply to the oilburner industry.

Warm Air Groups announce Annual warm air Conference

THE ANNUAL Forced Warm Air Conference for the mid-west has been announced by the National Warm Air Heating and Air Conditioning Association, Cleveland, and the Sheet Metal Contractors National Association, Elgin, Ill. It will be held on March 20 to 23, 1951 at Iowa State College, Ames, Ia. A tentative program lists representatives from Green Colonial, Keith, Des Moines Furnace & Repair, Campbell Heating, Lennox and other

All Wool Felt for Greater Efficiency
USE ONLY *General Filters* CARTRIDGES

Over a million users of General Fuel Oil Filters are proof of their greater efficiency. To retain peak efficiency, be sure you install a genuine General Filters replacement cartridge at least once each season.

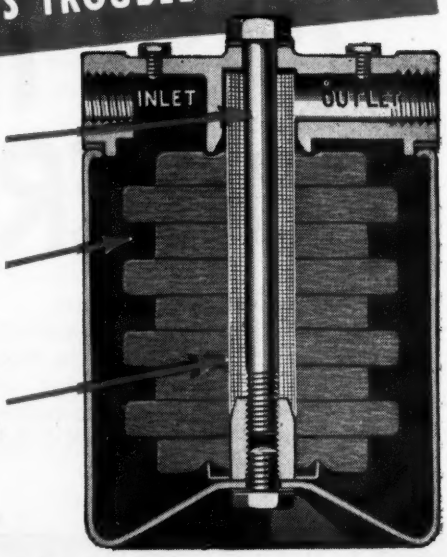
Only General Filters gives you an all-wool cartridge which is impervious to water. Their "step back" design provides far greater surface area and consequently faster dirt absorption. The chemically treated, fine-mesh, wire-screen center core acts as a secondary filter and prevents any lint from getting to the burner nozzle. The uniformity of the felt eliminates any chance of channeling. Designed especially for gravity or pressure fuel oil burners, only GENERAL Filters gives you all these features. Get the best—they cost no more.

DOUBLE FILTER SECTION ASSURES TROUBLE FREE FLOW

SINGLE CENTER BOLT FOR QUICK CARTRIDGE REPLACEMENT

STEP BACK CONSTRUCTION PROVIDES GREATER SURFACE AREA

FINE MESH CHEMICALLY TREATED SCREEN ACTS AS SECONDARY FILTER



GENERAL FILTERS SAYS:

Do your customers a favor—see that they have a genuine replacement cartridge at least once each heating season.

GENERAL FILTERS INCORPORATED — GENERAL FUEL OIL FILTERS — 12890 WESTWOOD AVE DETROIT 23, MICHIGAN

CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO

Here's Why *H. C. Little* Means Steady Volume, High Net Profit

Steady volume, minimum service and high net profit are enjoyed by H. C. Little dealers. Public preference for H. C. Little FULLY AUTOMATIC operation with NO PILOT LIGHT clinches sale after sale.

Look at the simple controls... follow the operation cycle... see for yourself why the H. C. Little oil burner, with automatic *self lighting* electric ignition, has a BIG competitive advantage.

H. C. LITTLE Automatic Oil Burner

Vaporizing type oil heating equipment is widely accepted as most practical for heating the typical home. Of all vaporizing oil heating equipment, H. C. Little is the only complete line with these three unique features:

1. Automatic self lighting electric ignition—NO PILOT LIGHT.
2. Catalytic heat control that gives improved burner performance and lower fuel bills.
3. The oil burner designed on the Progressive Low Temperature Carburetion principle, to eliminate high temperature "cracking".

By playing up these features and using them in competitive selling, H. C. Little dealers maintain steady volume at fair prices and insure high net profit.

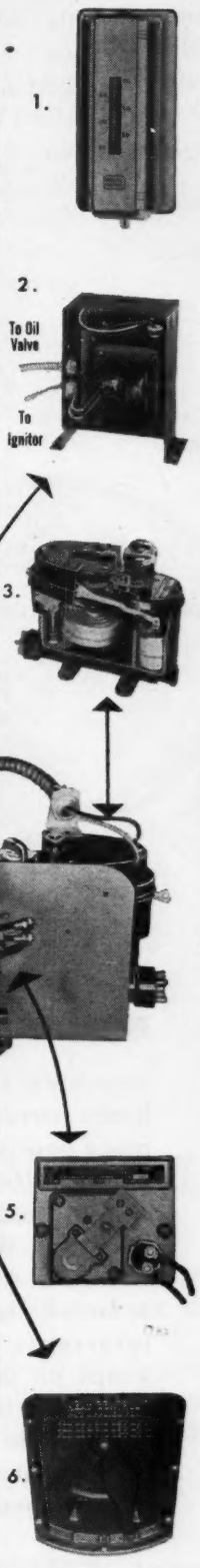
Address inquiries regarding dealerships to Dept.

H. C. Little Burner Company **SAN RAFAEL, CALIF.**

Or contact the Factory Representative nearest you:

Baltimore, Md.
Belmont, Mass.
Boise, Idaho
Chicago, Ill.
Columbus, Ga
Detroit Lakes, Minn.
Fayetteville, No. Car.
Kansas City, Mo.
Larned, Kansas
Newark, N. J.
Portland, Oregon
Prescott, Ariz.
Reno, Nevada
Salt Lake City, Utah
Seattle, Wash.
St. Louis, Mo.
St. Petersburg, Fla.

POWERFUL SALES BUILDING STORY TOLD IN SIMPLE CONTROL & OPERATION CYCLE



1.

ROOM THERMOSTAT, actuated by temperature drop, makes electric circuit through...

2.

AUTO-TRANSFORMER, which supplies proper voltage to (a) open the automatic oil valve and (b) heat the electric ignitor.

3.

HEAT MOTOR on top of oil valve opens slowly, allowing oil to flow to the burner.

4.

Oil enters burner at relatively cool end and thus is prevented from high temperature "cracking". The soundness of this H. C. Little "Progressive Low Temperature Carburetion" principle has been demonstrated in more than 160,000 installations over a 22 year period.

5.

3-VOLT ELECTRIC IGNITOR in bolted-on burner door becomes hot and ignites the oil.

THERMATIC DOOR automatically admits additional air to facilitate quick, easy starting WITHOUT mechanical air induction.

6.

CATALYTIC HEAT CONTROL regulates supply of air through roof of burner as flame increases after starting. Complete carbon-free combustion with catalytic oil is achieved and flame burns above the top burner ring inside combustion chamber.

7.

When required room temperature is reached, the thermostat contact breaks and THE BURNER IS COMPLETELY SHUT OFF. THERE IS NO PILOT LIGHT OR LOW FIRE STAGE. This is true, fully automatic operation, a big competitive advantage!

furnace manufacturers as participants.

The four day course will consider such subjects as a two-story house with gravity system converted to forced air; ranch-type house with forced air converted to a perimeter system and business building with forced warm air and summer cooling.

Reservations may be made at the Engineering Extension Service, Iowa State College, 110 Marston Hall, Ames. Ia. The fee, payable to the college, is $20 for each enrollee.

Wisconsin Industry Rally Features Casler as Speaker

THE EIGHTH ANNUAL State Wide Industry Rally and Dinner, sponsored by the Wisconsin Oil-Heat Association, Inc., Milwaukee, Wis., was held on February 9, in the Circus Room of the Hotel Wisconsin. The affair got underway with a cocktail party before the dinner. After dinner entertainment featured Lillian Brooks, Jack Larkin, Grant Krueger and the Grenadiers Orchestra.

Featured speaker was L. A. Casler, public relations counsel for the Oil-Heat Institute of America, Inc.; president of Casler, Hempstead & Hanford, Inc., Chicago advertising agency and executive vice-president of Eureka-Williams Corp. and manager of its Oil-O-Matic Division. His talk developed the theme, "Oil Heating—a real business for the future."

Dean L. E. Seeley, *College of Technology, University of New Hampshire and Stanley K. Smith, president, H. B. Smith Co., Westfield, Mass., are shown exchanging mutual congratulations. Dean Seeley has just been elected president of the American Society of Heating and Ventilating Engineers, while Mr. Smith recently became chairman of the Institute of Boiler & Radiator Manufacturers. Dean Seeley, consulting engineer for the H. B. Smith Co. for the past 25 years, a short time ago was named a member of its board of directors.*

IOMA elects Officers, hears Richdale at annual Meeting

ALL OFFICERS, along with five directors whose terms had expired, were re-elected at the annual meeting of the Independent Oil Men's Association of New England, Boston, held on January 11 in the Hotel Statler. Horace E. Davenport, George W. Pickering Co., was re-named president; Wesley E. Downing, State Fuel Co., vice-president; Frederick A. Whetton, Whetton's Oil Co., secretary and Robert W. Carney, Carney Young Utilities, Inc., treasurer. Joseph B. Wells is executive director.

Newly elected directors are: Fred E. Bergfors, Quincy Oil Co.; John P. Birmingham, White Fuel Corp.; Kenneth T. Howe, Jenney Mfg. Co.; Beton

Eddington
Oil Burner Nozzle Filters

Check your Eddington needs here:

- ☐ FILTERS
- ☐ NOZZLES
- ☐ VALVES
- ☐ STABILIZERS & AIR CONES
- ☐ STRAINERS
- ☐ ADAPTORS
- ☐ INSPECTION MIRRORS
- ☐ SERVICEMAN'S NOZZLE KITS

Small-capacity nozzles get *new efficiency*

Anything that cuts down callbacks, saves your servicing time, gives your customer more continuous service is particularly appreciated these days. That's the job done by the Eddington Nozzle Filter on small-capacity nozzles. Located right at the nozzle it intercepts the final impurities, keeps oil and nozzle clean, provides maximum combustion efficiency—*and* helps you keep your own service up to par, no matter what's ahead.

Want information on any of the items listed? Just drop us a postal; you'll get a quick reply.

EDDINGTON METAL SPECIALTY COMPANY
1050 Czarnecki Street, Eddington, Pa.

Model W-30

WEBCO
BOX BRAKES

THIS REVOLUTIONARY BRAKE WILL SAVE YOU TIME AND MONEY

Exclusive WEBCO features which mean

MORE BENDS . . . IN LESS time for LESS MONEY

1. **A sheet metal brake with SLIP-END clamping bars and SLIDING folding fingers**
2. **BOX attachment**
3. **Six finger elements ranging from 1" to 12"**

Two models: W-30, W-48

All models furnished with (a) Slip End Clamping Beam (b) folding bar (c) fingers (d) stands, shipped set up and skidded.

Immediate Delivery

SHEET REMAINS FLAT—sheets lay in horizontal position throughout forming and are not removed until completed.

EASIER HANDLING—as sheets lay in machine, hands are free, to set work, to mark and clamp.

EASY OPERATION—as cams lock at any point, very light pressure may be applied on sheet, allowing for positioning to mark.

TOP FLANGE BOXES—all box fingers are designed to allow up to 1½" inter-top flanges.

GENERAL FORMING—bends up to 52 degrees can be made and flattened.

BOX FINGERS—may be positioned of any desired width, anywhere along full length of bed.

BOX ATTACHMENT IS ADAPTABLE TO ALL STANDARD WEBCO BRAKES

For further details about Models W-30 and W-48, write today.

WEBB MACHINE and TOOL CO., 600 Washington Road, Pittsburgh 28, Pa.

M. Kaneb, Union Oil Co.; Louis I Rosenfield, Lincoln Oil Co.; John W. Scott, Buckley & Scott Utilities, Inc.; George W. Stetson, Valley Oil Co. and Warren S. Keith, Keith Oil Co.

The following continue as members of the board: Alfred Buckley, Buckley & Scott, Inc.; Marcel Fugere, Manchester Coal & Ice Co.; Fritz F. Nelson, Petroleum Heat & Power Co.; William C. O'Meara, Pennsylvania Oil Co.; J. Everett Robbie, Quincy Coal & Oil Co.; Richard Tait, Hedlund Coal Co.; Benjamin Waldman, Boston Ice Co., and George F. Williams, Petroleum Eng. Corp.

J. C. Richdale, assistant to the president, Esso Standard Oil Co., was the principal speaker at the annual dinner, discussing "New England Faces the State of Emergency." Briefly referring to the arrival of natural gas in the New England area he stated, "I do not think the advent of natural gas is any occasion for our throwing in the towel." Continuing he remarked, "Coal, gas and oil all must have a part in supplying our heat and energy needs of the future. I am most anxious they reach their proper share through pricing based on economic value to the customer rather than by a Government Edict, which says one person must burn oil and another coal."

He quickly emphasized that this should not be interpreted as a prediction we were going to run out of oil, but explained that "while the price of heating oil has gone up considerably in the past few years, at present levels there is still no incentive for refiners to increase their yield of heating oil at the expense of more profitable products." He followed with the opinion that we probably could not continue the present rate of burner installations without "getting into serious trouble if we run into a severe winter in the next two or three years."

Mr. Richdale stressed the importance of increasing storage capacities at all levels, explaining that the impact of fueloil business comes in four months of the year, so that with adequate storage facilities "we can accumulate oil during the eight months when consumption is lowest and transportation costs are lowest."

Concluding, he pointed out that the petroleum industry has never been in a healthier condition than it is today and urged industry members to take an active part in the work of the OIIC. "If controls are inevitable," he said, "let's try and operate our business within them and not waste precious time trying to figure out ways and means to beat them."

❖

William Ensign has been promoted to assistant sales manager, Marsh Heating Equipment Co., sales affiliate of Jas. P. Marsh Corp., Skokie, Ill. Mr. Ensign, who has been with the Marsh organization for several years in a sales capacity, will include among his duties coordination of a nation-wide sales organization with the home office.

E. R. Page has been appointed operations manager, Shell Oil Company's New England Div., replacing C. B. *Goodman,* promoted to manager of Shell's marine terminal in Sewaren, N. J. Mr. Page, most recently St. Louis operations manager, a position he took in 1943, first joined Shell in 1933.

There is only ONE

TRADE MARK REGISTERED

Draft-O-Stat

BAROMETRIC DRAFT CONTROL

AND HOTSTREAM MAKES IT!

OVER ONE MILLION

SUCCESSFUL INSTALLATIONS

New Model "B" (illustrated) now available in 6, 7, 8, 9, 10 and 12 inch sizes. Write for Bulletin.

THE HOTSTREAM HEATER CO.

6925 QUINCY AVENUE • CLEVELAND 4, OHIO

Manufacturers Activities

Webster Electric plans Service training Meetings

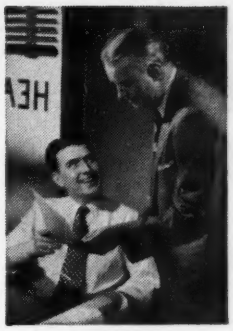
REPRESENTATIVES from the sixty authorized service stations of Webster Electric Co., Racine, Wis., gathered at a meeting on January 24 at the Penn Sheraton Hotel in Philadelphia during the Heating and Ventilating Show.

B. T. Wiechers, sales manager, Industrial Div., introduced Louis Ehrich, service manager and James H. Lahey, Industrial Div., who told in detail how Webster was preparing to aid oilburner dealers to meet the challenge of the future. Mr. Lahey described briefly the difficulties that probably will have to be faced and emphasized the growing importance that will be attached to oilburner service. Briefly analyzing the causes of service calls during 1950, he said "it was apparent . . . that we must help find a way to reduce the non-essential use of time and facilities that now are so often imposed upon your Service Stations by the uninformed dealer or serviceman."

To this end, Webster is preparing a series of educational kits for dissemination of service information at the local dealer level. This activity is to be handled by the authorized service stations, with information contained in the kit. It will include charts, slide films and suggested text, from which an instructor can compile an entire meeting program. Subject matter will deal with Webster fuel units, transformers and Thermo-Drive, in addition to general information and instruction on handling "No-heat" service calls.

After personnel of the Service Stations have received instruction, regional meetings will be programmed for dealers in each locality. Supplementing this schedule will be a monthly mailing from Webster, containing service and maintenance information and focusing the attention of dealers on the Service Stations.

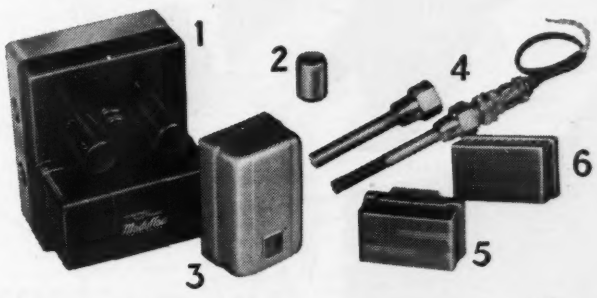
Webster Electric now is compiling the data to be included in the kits and mailings, which it is planned will be available at an early date.



Knowing more about Moduflow can help you make more money. Send the coupon below for...

Facts you need—FREE!

The Honeywell temperature control equipment that went into the job economy-bidder Morton *didn't* get (see opposite page) was the Y216B Electronic Moduflow system shown below. With this system—specially designed to overcome the slow response of the concrete floor mass—you can give the home owner the finest automatic temperature control available for radiant floor panels. Y216A Electronic Moduflow system provides these same results in ceiling panel installations. Both systems provide genuine comfort all winter long.



The Y216B Electronic Moduflow Control System above consists of: 1. Electronic Relay Amplifier; 2. Cycler; 3. Outdoor Anticipator; 4. Immersion Thermostat; 5. Electronic Thermostat; 6. Averaging Thermostat.

This Y216B is a typical Moduflow "package," but remember this: Honeywell Electronic Moduflow is an elastic system that's adaptable to almost all types of heating—whether new or existing; gas, oil or stoker-fired. And it can be used with all types of limit and primary heating controls.

Electronic Moduflow is superior to all other home temperature control systems for two reasons:

All sensing elements are *electronic*—which means they're up to 100 times more sensitive than mechanical controls.

Units of the systems take care of *all three* important control factors in home heating—weather changes outdoors, load shifts indoors and structural heat loss.

You owe it to yourself to find out more about Honeywell Electronic Moduflow. So why not fill in and mail the coupon to us *today?*

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
Minneapolis 8, Minnesota, Dept. FH-2-28

Gentlemen: Please send me additional information on

☐ **Domestic application of Electronic Moduflow.**

☐ **Domestic application of Electronic Moduflow for radiant panel heating.**

Name _____

Firm Name _____

Address _____

City _____ **Zone** _____ **State** _____

OT* SERVICEMAN SAYS —

"My customers are satisfied

'REBUILT' MEANS 'LIKE NEW' AT WEBSTER ELECTRIC AUTHORIZED SERVICE STATIONS"

"I like it! . . . Here's a manufacturer who doesn't forget you after making the sale. You know, I can take old units into a conveniently located Webster Electric Authorized Service Station and have them rebuilt like new. Only genuine Webster replacement parts are used. As a result, the rebuilt unit tests exactly the same as a new unit. Now *that's* the kind of arrangement that helps me as a serviceman ...can you blame me for being enthusiastic about Webster Electric fuel units and recommending them and using them? Try them . . . you'll get what I mean."

*Old Timer

An identical unit is made for sale in Canada by Canadian Acme Screw & Gear, Ltd. of Toronto, under license by Webster Electric Company, Racine, Wis. Established 1909.

WEBSTER ELECTRIC
RACINE • WISCONSIN

"Where Quality is a Responsibility and Fair Dealing an Obligation"

Fitzgibbons celebrates Sixty-fifth Anniversary

THE SIXTY-FIFTH ANNIVERSARY of the Fitzgibbons Boiler Co., New York, N. Y., was marked on January 23, with a celebration at the company's exhibit during the Heating and Ventilating Exposition, Philadelphia.

Paul K. Addams, president, cut a huge birthday cake at the booth, watched by about 60 members of the Fitzgibbons organizations and prominent persons in the heating industry. Among those attending were Homer Addams, chairman of the board and a past-president of the ASHVE.

President Addams pointed out that only about 2% of the country's manufacturing corporations have been in business continuously for 65 years. The company was established in 1886 at Oswego, N. Y. by Patrick Fitzgibbons, and has since turned out steel boilers for commercial and residential needs. The company is negotiating for defense contracts now but will continue to produce their regular lines.

Harvey builds branch Store; Increases rebuilding Business

ACQUISITION of a 100 ft. by 100 ft. lot on Columbus Ave., Mt. Vernon, N. Y., has been announced by Sid Harvey, Inc., Valley Stream, N. Y., along with the information that a store is being constructed there for its Westchester branch. Construction is under way and the new building is expected to be occupied about March 1.

The Westchester branch has been located in New Rochelle since June 1947, but even the leasing of an adjoining store to double the space was not enough to care for the increased business from the area.

Last year the number of defective oilburner, gas and stoker parts rebuilt by the company totalled 115,706, a 24% increase over 1949. The largest gain was registered in the combustion relay rebuilding department, which turned out 36,484 units, a gain of 8,704 over the previous year. Educational lectures on relays and their problems, which have been attended by 4,000 service men from Boston to Washington, D. C. during 1950, are cited by Sid Harvey, president, as a prime reason for the gain.

Ashland shifts Personnel At stockholders' Meeting

AT THE JANUARY 15 annual meeting of the stockholders of the Ashland Oil & Refining Co., Ashland, Ky., the present board of directors was re-elected and changes and additions in the executive personnel were approved. The shifts were made to facilitate the increased executive responsibilities arising from the company's growth and expansion.

Paul G. Blazer was re-elected chairman of the board and J. Howard Marshall, former president, was elected to the position of vice-chairman of the board. As such, he will function as an operating executive directly under the chairman, and will be relieved of various detailed administrative duties, but will continue responsible for the company's crude oil operations. James L. Martin, director of the company for more than 30 years, was elected to a new post, chairman of the executive committee.

Rexford S. Blazer, previously president of Allied Oil Co. and Frontier Oil Refining Corp., two subsidiary companies, is Ashland's new president. Re-elected were: Everett F. Wells, executive vice-president; E. L. McDonald, secretary-counsel; E. W. Seaton, treasurer; Edward Emrick, Jr., assistant secretary and assistant treasurer; A. J. Points, controller; S. M. Burnam, assistant secretary; J. P. Trout, assistant treasurer and Angus W. McDonald, assistant secretary.

The promotion of Mr. Wells to executive vice-president was announced recently, as was the appointment of Mr. Emrick and Alex S. Chamberlain as executive assistants.

U. S. Radiator purchases Cyclotherm Corporation

ASSETS AND BUSINESS of Cyclotherm Corp., Buffalo, N. Y., were recently acquired by the United States Radiator Corp., Detroit, Mich. Cyclotherm will continue to operate as a special entity, H. B. Steggall, vice president of U. S., announced, adding, "The sales program with all distributors of Cyclotherm will be continued in its present form" and that new contracts are to be issued to each distributor.

OT* SERVICEMAN SAYS —

"HERE'S WHERE YOU'LL FIND WEBSTER ELECTRIC Authorized Service Stations"

CALIFORNIA
San Francisco, ELECTRICAL COMMUNICATIONS, INC.—765 Clementina Street

COLORADO
Denver 4, INSTRUMENT SERVICE CO.—833 Champa Street

CONNECTICUT
Hartford 6, BELL PUMP SERVICE CO.—44 New Britain Avenue
New Haven, BELL PUMP SERVICE CO.—750 Congress Avenue

D. C.
Washington, R. E. MICHEL CO.—1320 First St. N. E.

ILLINOIS
Chicago 44, W. C. MORSE CO.—4629 West End Avenue
Rockford, OIL HEAT PARTS SERVICE—608 Lafayette Avenue
Winnetka, NORTH SHORE HEATING SUPPLY CO.—806 Oak Street

INDIANA
Gary, G. W. BERKHEIMER CO., INC.—1040 Washington Street
Indianapolis, HOOVER-BOWERS CO.—1523 E. Washington St.

IOWA
Des Moines 9, THERMAL COMPANY, INC.—106 11th Street

MAINE
Portland 3, REFRIGERATION & OIL BURNER SUPPLY CO.—133 Marginal Way

MARYLAND
Baltimore 2, R. E. MICHEL CO.—1011 Greenmount Avenue

MASSACHUSETTS
Brockton, R. H. AUSTIN CO.—631 Warren Avenue
Cambridge, CRONNIN SUPPLY CO.—60 Broadway
Framingham, OIL HEATING SUPPLY CO.—8 Cedar Street
Malden, E. L. KIMBALL CO.—1256 Eastern Avenue
Springfield, BELL PUMP SERVICE CO.—888 Main Street
Wollaston, W. S. PLUMMER—109 Lincoln Avenue
Worcester, JOHN W. WALSH, INC.—66 Grove Street

MICHIGAN
Detroit 2, WM. G. BOALES & ASSOCIATES—1150 W. Baltimore Avenue
Detroit 3, HYDRAULIC & PUMP REPAIR CO.—133 W. 7 Mile Rd.

MICHIGAN—Cont.
Grand Rapids, R. L. DEPPMANN—333 Fuller N. E.

MINNESOTA
St. Paul 4, THERMAL CO., INC.—2526 University Avenue

MISSOURI
Kansas City 8, SUPERIOR REFRIGERATION SUPPLY CO.—1816-18 Walnut St.
St. Louis 10, CRESCENT PARTS & EQUIPMENT CO., INC.—825-31 S. Boyle Avenue

NEBRASKA
Omaha, OMAHA STOVE REPAIR WORKS—1206 Douglas Street

NEW HAMPSHIRE
Portsmouth, EARL H. CLARK—510 Sherbourne Road

NEW JERSEY
Elizabeth, CERTIFIED FUEL UNIT SERVICE—600 Spring Street
Hawthorne, UNIVERSAL ENGINEERING CO.—344 Wagaraw Road
Newark, CERTIFIED FUEL UNIT SERVICE—671-3 Sanford Ave.
Pennsauken Twp., CERTIFIED FUEL UNIT SERVICE—Browning Road Circle Jct. Rts. 38 and 40

NEW YORK
Albany, CERTIFIED FUEL UNIT SERVICE CO., INC.—1018 Central Avenue
Bronx 61, VIN'S OIL BURNER PARTS SUPPLY CO.—3614 E. Tremont Avenue
Brooklyn 16, THE CAPSON COMPANY, INC.—106 Rogers Avenue
Buffalo, FRONTIER OIL REFINING CORP.—367 Northampton St.
Flushing, THE CAPSON CO., INC.—40-16 149th Place, Murray Hill Plaza
New Hyde Park, THE CAPSON CO., INC.—1014 Jehrico Turnpike
New York 21, INTERCITY HEAT AND POWER SUPPLY CO.—1366 York Avenue
Rochester, ROCHESTER FUEL PUMP SERVICE—60 Allen Street
Rochester, ROCHESTER OIL BURNER PUMP & CONTROL SERVICE—204 Clinton Ave. N.
Scarsdale, A. B. WOLLE & COMPANY—69 Harney Road
North Syracuse, E. A. PORTER, BUFFALO PUMP SERVICE—440 S. Bay Road

NORTH CAROLINA
Burlington, ALLEY & RADER SERVICES—1006 Webb Ave.

OHIO
Cincinnati 10, F. E. WINSTEL COMPANY—1218-20 Race St.
Cleveland, OHIO PUMP SERVICE COMPANY—7904 Lorrain Ave.
Toledo, GIRKINS ELECTRIC COMPANY—2056 Cantin Ave.

OREGON
Portland 14, INDUSTRIAL CONTROL COMPANY—1418 E. Burnside

PENNSYLVANIA
Philadelphia, CERTIFIED FUEL UNIT SERVICE CO.—3412-14 W. Allegheny Avenue
Pottstown, R. F. SMALE & COMPANY—140 King Street

RHODE ISLAND
Providence, R. I. FUEL PUMP SERVICE CO., INC.—847 N. Main Street

UTAH
Salt Lake City 7, INTER-MOUNTAIN OIL BURNER SUPPLY CO.—4045 S. State St.

VIRGINIA
Norfolk, REFRIGERATION SUPPLIERS—633 W. 24th Street
Richmond, R. E. MICHEL COMPANY—514 S. Pine Street
Roanoke, SOUTHERN REFRIGERATION CORP.—1850 S. Jefferson Street

WASHINGTON
Seattle, SEATTLE PUMP SERVICE COMPANY—817 Republican St.
Spokane, CHARLES A. BLACK—N. 614 Monroe Street
Tacoma 3, GENSCO, INC.—1111 South Tacoma Avenue

WISCONSIN
Milwaukee, REFRIGERATION PARTS CO.—2534 W. Fond du Lac Avenue

FOREIGN

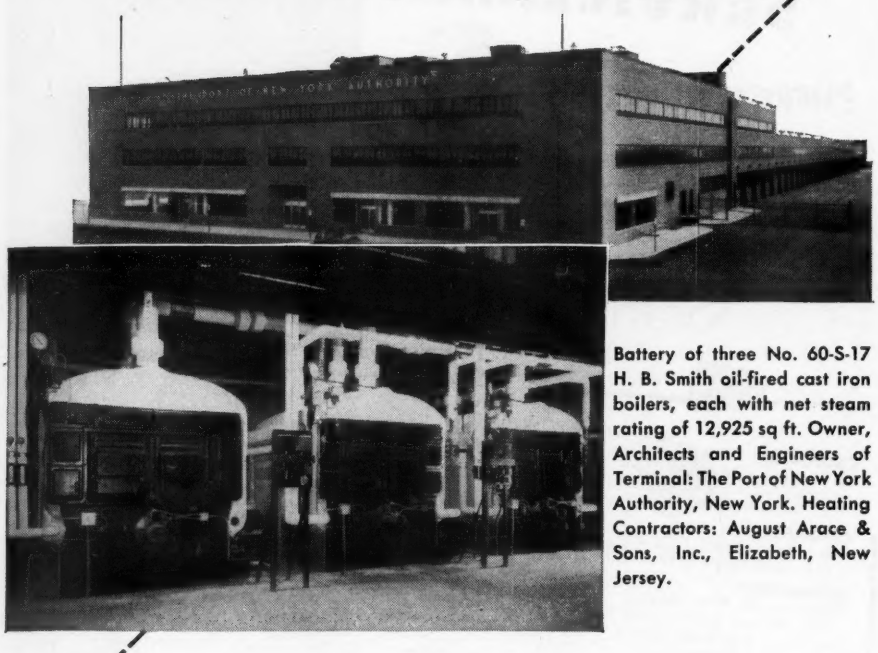
SWEDEN
Stockholm, REGULATOR AND INSTRUMENT, A. B. BILLMAN—128 Lindhagensgatan (Branches at Malmo, Goteberg, Karlstad)

HOLLAND
Amsterdam, N.V. V/H NIERSTRASZ—62 Plantage Middenlaan

WEBSTER ELECTRIC
RACINE • WISCONSIN

"Where Quality is a Responsibility and Fair Dealing an Obligation"

the WORLD'S LARGEST UNION motor truck terminal



Battery of three No. 60-S-17 H. B. Smith oil-fired cast iron boilers, each with net steam rating of 12,925 sq ft. Owner, Architects and Engineers of Terminal: The Port of New York Authority, New York. Heating Contractors: August Arace & Sons, Inc., Elizabeth, New Jersey.

chooses H. B. Smith BOILERS

To assure trouble-free heating and hot water supply, The Port of New York Authority selected H. B. Smith cast iron boilers in the new Union Motor Truck Terminal at Newark, N. J.

For the 31,000 feet of steam radiation, three No. 60-S-17 Smith oil-fired cast iron boilers do an eminently competent job, as does the No. 340-W-11 Mills boiler in the adjacent maintenance building.

In winter, four No. 608 Smith Manifold Indirect Heaters provide a total hot water capacity of 1680 GPH at 100°F. temperature rise, while in summer, one No. 34-W-11 Smith oil-fired unit with capacity of 1596 GPH is adequate.

7-A

Since 1853

H.B. Smith

CAST IRON BOILERS

THE H. B. SMITH CO., Inc., Westfield, Mass.

Most complete line in the world of cast iron boilers for heating

York-Shipley Unveils "The Great White Line"

SPARKED by a newly styled 63-piece line and a new merchandising plan for its distributors and dealers, York-Shipley, Inc., York, Pa., introduced its 1951 products and program to more than 200 members of its wholesale and retail organization, January 10. "The Great White Line" for 1951 has been newly finished and improved. All units are gleaming white and styled like modern kitchen appliances. The line covers gas and oilfired conversion burners, boilers, warm air units and water heaters.

The company aims to add a minimum of 2,000 retail outlets to its distribution system this year in addition to strengthening present wholesalers and retail dealers. A system of direct promotion has been prepared and tested to interest those outlets wanted, and an abundance of wholesale sales helps have been produced for its distributors. An almost equal volume of retail sales helps also are available, including sales manuals, newspaper, outdoor and direct mail advertising, as well as banners, window streamers and point of sale advertising.

The striking white York-Heat line has been designed to encourage dealers to display it prominently in showrooms and other places where its appearance will catch the public's eye, according to S. H. Shipley, president. "We feel that heating equipment, one of the most essential utilities in the home, has been too long neglected by the trade and by the public. We believe it should be displayed at least as prominently as lesser appliances, and assume its rightful place in the public consciousness."

Shell nearing Completion Of largest expansion Program

AN ACCELERATED EXPANSION of oil distribution facilities will be completed by Shell Oil Co. early this year, a program costing tens of millions of dollars and involving 49 new or expanded plants in 25 states. Added facilities will increase by several hundred million gallons the company's total petroleum storage and handling capacity, and have been designed to strengthen the links between principal production areas and main consuming centers, to provide more storage space at local distributing points and, in the case of

certain larger terminals, to provide big backlogs of products on a regional basis.

In general each new plant includes big storage tanks for gasoline, fueloils and other products, a warehouse with space for storing packaged goods, an office building and loading facilities at which trucks are filled. A substantial part of the investment was devoted to expanding and improving plants already in use, where new storage tanks were built, pumps and pipes were replaced to increase the volume of products moved and modern warehouses, office buildings, trucks and railroad loading facilities or other special units erected.

Winkler Jubilee begins Plans for year's sales Program

THE WINKLER ALL-AMERICAN JUBILEE, held by U. S. Machine Corp., Lebanon, Ind., at the Claypool Hotel in Indianapolis, featured meetings on January 11 and 12, inaugurating the company's 1951 sales program. On January 10 Open House activities were highlighted by the opening of Winkler's new Training Institute near plant Two, where engineering and retail sales training clinics will be held on alternate weeks.

Philip C. Kosch, who has represented U. S. Machine in a sales supervisory capacity in New England since 1939, has joined the Winkler office force at Lebanon as sales training manager. As such he will be responsible for the Winkler Retail Sales Clinic, will assist in conducting sales meetings at the factory and in the field and will assist in training district sales managers and trainees.

The program for the Jubilee meeting included talks by The Honorable Henry F. Schricker, Governor of Indiana; Philip L. Bayt, Mayor of Indianapolis; Robert Gray, editor, FUELOIL & OIL HEAT; Frank Bettger, author of the book, "How I Raised Myself from Failure to Success in Selling" and W. A. Matheson, American Bildrok Co. and formerly in charge of sales for Williams Oil-O-Matic.

The evening of January 11 was set aside for a special party at the Riley Room of the Claypool Hotel, including dinner and dancing.

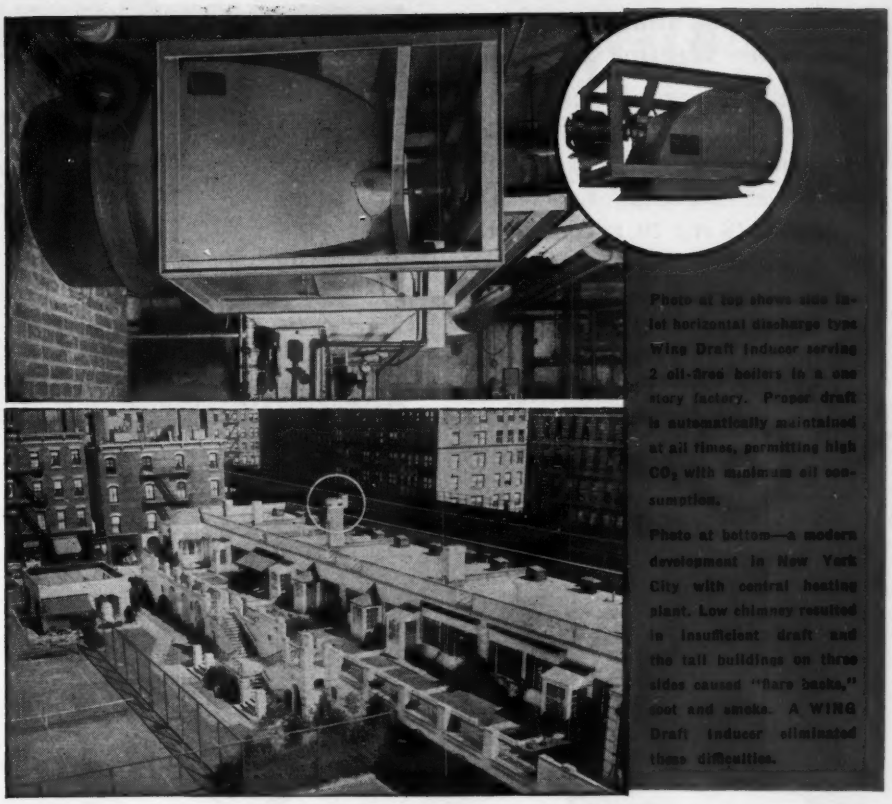


Photo at top shows side inlet horizontal discharge type Wing Draft Inducer serving 2 oil-fired boilers in a one story factory. Proper draft is automatically maintained at all times, permitting high CO_2 with minimum oil consumption.

Photo at bottom—a modern development in New York City with central heating plant. Low chimney resulted in insufficient draft and the tall buildings on three sides caused "flare backs," soot and smoke. A WING Draft Inducer eliminated these difficulties.

Positive Draft REGARDLESS OF WEATHER OR SIZE OF CHIMNEY

The Wing Draft Inducer provides a means for furnishing positive, uniform adequate draft for low pressure heating plants without the need for tall, unsightly, expensive stacks.

It permits operating at high efficiencies without regard to weather conditions.

Thorough and efficient combustion with high CO_2 content is assured. Smoke, gas and explosion hazards are reduced or eliminated.

L. J. Wing Mfg. Co.

General Offices and Factory:
66 Vreeland Mills Road, Linden, N. J.
Canadian Factory: Montreal

Wing
DRAFT INDUCERS

Timken holds annual Sales Meeting at Factory

THE ANNUAL SALES MEETING of the Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich., was held at its general offices on December 27, 28 and 29, to consider the best course of action to meet present and future business uncertainties. Factory officials and field sales personnel attended the sessions, directed by General Manager T. A. Crawford, assisted by C. A. Cooper, assistant general manager; R. M. Marberry, advertising manager and several department heads. Walter F. Rockwell, president, Timken-Detroit Axle Co., also participated.

Mr. Crawford keynoted the meeting with analyses of 1950 achievements, prospects for 1951 and Timken Silent Automatic policies and methods. Mr. Rockwell devoted his remarks to company objectives. Later subjects on the program included such specific items as the district sales manager's job, equipment and factory support; plans for representation at coming shows and exhibits and the Division's product lines.

. . . of special interest to fuel oil dealers

DIARY of a DIRTY FILTER

Sunday, October 1st
Starting life today with clean face and good intentions.
Monday, January 1st
Now so dirty I am beginning to make it hard for the furnace blower.
Thursday, February 1st
Boy, I'm really dirty now! Hard for air to get through. Innocent furnace blamed for lack of heat. I need replacement . . . fast!

AMER-*glas* to the rescue!

Urge your customers to replace dirty filters regularly with new AMER-*glas* Filters. Inexpensive. Clean to handle, no prickly slivers. AMER-*glas* is *the* filter for satisfied customers . . . a new source of regular profit to you.

Send today for proof of AMER-glas profits.

An *Engineered* product of

American Air Filter

COMPANY, INC.

134 Central Avenue • Louisville 8, Kentucky

Perfex expands free Factory training Program

FREE FACTORY TRAINING SCHOOLS, sponsored by Perfex Corp., Milwaukee, Wis., were extended to eastern localities during January and February. Perfex offers free instructions about the operation of controls on heating plants to dealers, contractors, wholesalers, oil companies, their servicemen and salesmen. The students receive technical training from skilled engineers, participate in classroom discussions and work with actual heating system equipment.

The course includes the basic fundamentals of heating and heating systems, encompassing controls used in warm air, hot water, steam, electric and unit heater systems fired with coal, gas or oil. C. H. Burkhardt, heating editor, *Sheet Metal Worker* and *Plumbing and Heating Journal*, directs the classes.

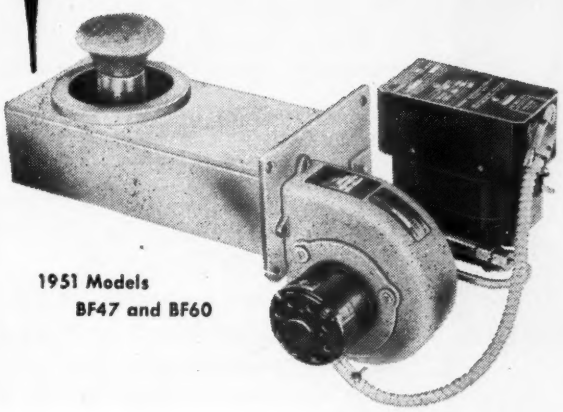
A Farmingdale, Long Island, school was conducted January 29 to 31 at the

MORE FURNACE MANUFACTURERS THAN EVER BEFORE WILL CHOOSE

KRESNO-STAMM
Since 1927

The New 1951 *Ball Flame* OIL BURNER

Reg. U.S. Patent Office



1951 Models
BF47 and BF60

In 1951 manufacturers will again show their overwhelming confidence in the quality and performance of "Ball Flame" Burners by making them a vital part of the furnaces they will ship to small homes projects and to builders of hundreds of individual homes.

This *completely automatic, pressurized air, gravity type oil burner* is now standard for leading makes of small furnaces, installed in many flourishing home developments.

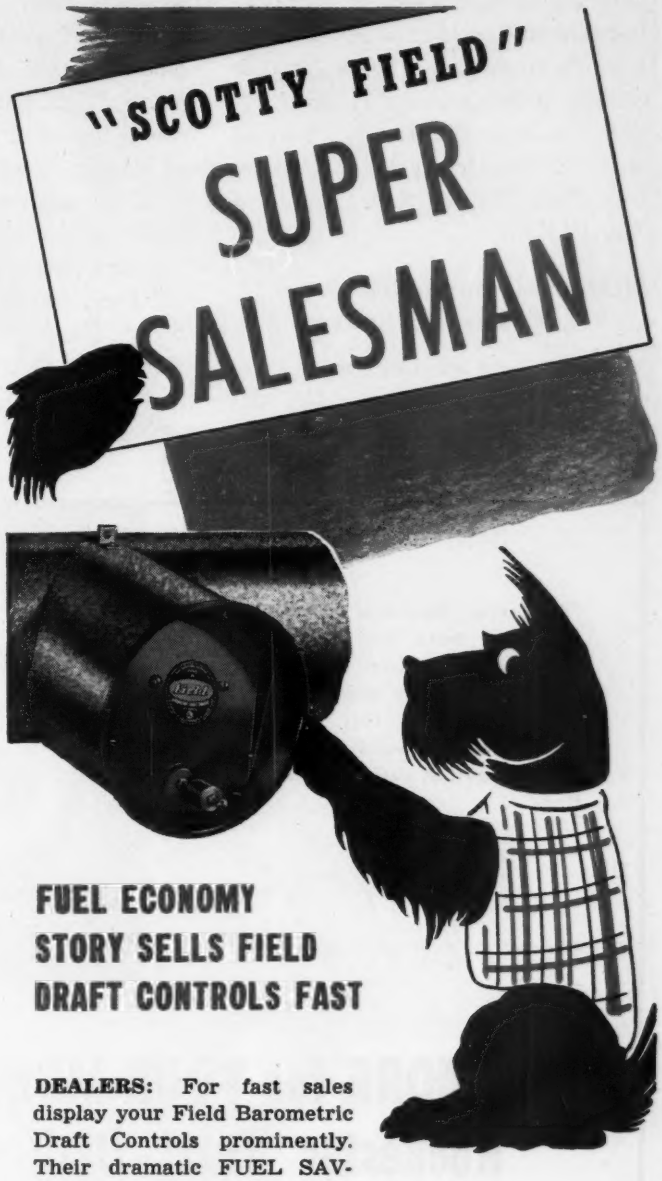
Builders and heating contractors in large numbers are writing the "Ball Flame" into their furnace specifications.

Here's Why

- ✓ **It's absolutely quiet—no motor hum, no flame roar.**
- ✓ **It burns less than 0.75 gallon per hour *without clogging*, flame deflection and burning out of fire boxes, as with small capacity pressure burners.**
- ✓ **It vaporizes and burns the oil perfectly — no starving the center of burner flame and poor combustion.**
- ✓ **An automatic levelling device is built into each burner.**

KRESNO-STAMM MFG. CO. (America) Inc.
PALISADES PARK, N. J.
Canadian Affiliate: Kresno-Stamm Mfg. Co. (Canada) Ltd.
1452 Drummond Street • Montreal, P. Q.

"SCOTTY FIELD" SUPER SALESMAN



FUEL ECONOMY STORY SELLS FIELD DRAFT CONTROLS FAST

DEALERS: For fast sales display your Field Barometric Draft Controls prominently. Their dramatic FUEL SAVING story makes them best-sellers, self-sellers!

A Field Barometric Draft Control improves the performance of any heating plant—provides for lower fuel consumption, increased safety, longer plant life. That's why dealers find it profitable and easy to sell the efficient, durable Field Barometric Draft Control. Write today for complete information on the Field Barometric Draft Control line.

On The Finest Heating Equipment Field Controls The Draft.

CONTROLLED DRAFT BY Field

FIELD BAROMETRIC DRAFT CONTROLS

FIELD CONTROL DIVISION
W. D. CONNELLY & COMPANY — MENDOTA, ILLINOIS

AFFILIATES
CONCO MATERIALS HANDLING DIVISION
CRANES—HOISTS

Field REGISTERED

AFFILIATES
CONCO BUILDING PRODUCTS, INC.
BRICK—TILE—STONE

BAROMETRIC DRAFT CONTROLS

fuel oil & oil heat

Long Island Agricultural & Technical Institute and another in Newark, N. J. on February 5 to 7 at the Newark College of Engineering. A third session is to be held February 18 to 20 at the Walter Hervey Junior College, New York City. Classes are held from 7 to 10 P.M.

McDonnell announces Winners of Sweepstakes

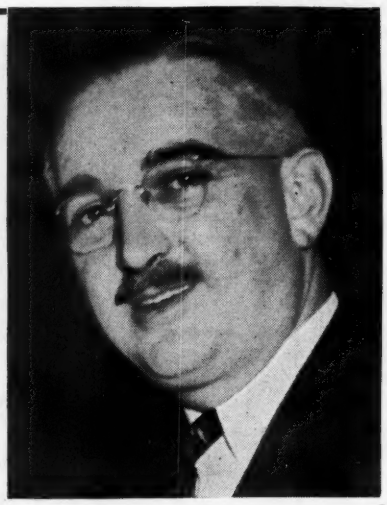
THE RITUAL of selecting the winners of the 1950 Sweepstakes, held by McDonnell & Miller, Inc., Chicago 18, Ill., was observed appropriately on Christmas Eve at the company's main office. Winner of the first prize was W. S. Ditto, Louisville, Ky., who received the set of three matched pieces of luggage. Second prize, a Land Polaroid camera, went to G. Kurker, oil-burner dealer of Medford, Mass.

Schick electric razors were given the third and fourth prize winners, Gordon A. Hagan, Sioux City, Ia. and Bill Arrington, Macon, Ga. Bill Masoner of Chicago won the Miracle kit-in-a-club golf tool.

"Rochester 'Dual-Dial' Oil Gauges give you more for your money. Their dependability and positive leak-proof feature eliminates needless service calls. This is money in our pocket, and builds our business through better customer satisfaction."

Robert S. Hoffman

President, Oil Heat and Engineering, Inc., Hartford, Conn.



"MORE for YOUR MONEY with Rochester 'Dual-Dial' Gauges"

Oil Heat and Engineering, Inc. is the largest Timken dealer in heating equipment and supplies in Connecticut. They have been using Rochester Oil Burner Gauges for over 15 years. Like dealers the country over, *they have found the Rochester Gauge one gauge they can install with complete confidence that it will not cause trouble through faulty operation or fume leakage.*

Rochester "Dual-Dial" Gauges with the magnetic leak-proof construction cannot leak fumes or spill oil, even under pressures. They have been Underwriters' listed for over 25 years. Stocked by leading wholesalers everywhere for 275 gallon oil burner storage tanks in the following depths—22", 24", 26", 27", 42", 44" and 47"; 1½" and 2" pipe thread connections. Special lengths to order. *ROCHESTER* MANUFACTURING CO., INC., 8 Rockwood St., Rochester 10, New York.

ROCHESTER DEPENDABLE ACCURACY GAUGES

ROCHESTER MANUFACTURING CO., INC.

DIAL THERMOMETERS · GAUGES · AMMETERS

General Controls plans Midwest Factory, opens Branch

REVERSING what it describes as a trend to move industry to the West Coast, General Controls Co., Glendale, Calif., is planning to build a new factory and warehouse in Skokie, Ill., just north of Chicago. The company has completed purchase of a 4½ acre site and has plans for the modern new building out for bid. Construction is scheduled to begin early this year, with final designs and exact details not yet completed.

W. A. Ray, president, says the Skokie plant will permit General Controls to serve better its growing number of Midwest and Eastern customers. Completion of the factory will afford the company manufacturing facilities in California and Illinois, with the warehouse capacity providing excellent facilities to service the nation's major marketing areas.

On January 1 the company opened a factory branch sales office in Indianapolis, Ind., located at 1035 N. Pennsylvania St. Richard H. Weber has been named to manage the office, the 24th factory branch to be established. The Indianapolis branch will cover territory formerly serviced by the company's Chicago and St. Louis offices and will be under the supervision of the Chicago outlet.

General was begun in 1920 by Mr. Ray and his next youngest brother. Primary products include automatic controls for residential and commercial heating, industrial plant, refrigeration and aircraft industries. In 1950 the firm doubled its $7 million gross sales of 1949.

National Fuel Conservation Program explained in Booklet

THE PROGRAM inaugurated by the National Fuel Conservation Co., Pleasantville, N. Y., to achieve maximum heating efficiency is explained in a booklet issued recently. The program is carried out by local Associates of the company, who are franchised and identified with an emblem.

Seven steps are undertaken in the plan, beginning with a scientific analysis of combustion efficiencies, followed by the installation of a new refractory combustion chamber and application

Symbol of Dependability

OIL BURNER MOTORS

No matter how good your Oil Burner may be, it can be no more reliable than the motor that drives it. Emerson-Electric oil burner motors are specially designed and precision-built for this job . . . they are totally enclosed, extra quiet in operation, require a minimum of maintenance and meet Underwriters' Laboratory specifications for oil burner service. Write for Oil Burner Motor Data Bulletin No. 108.

In earning a reputation for dependable performance there is also the opportunity to demonstrate leadership. Only a very few accept the challenge. You can point out one or two leaders, in every line of manufacture, whose success resulted from their products having become symbols of dependability.

Scores of America's best known manufacturers depend on Emerson-Electric motors to power their products. They know that customer satisfaction and dependable performance go hand in hand.

A background of 61 years of motor manufacturing experience stands behind Emerson-Electric motor design and production, offering the right motor for every job, in ratings from 1/20 to 5 h.p.

Consider the advantages of Emerson-Electric motors when planning your long-range program for top-flight leadership ratings on your equipment. Send for complete literature today.

THE EMERSON ELECTRIC MFG. CO.
ST. LOUIS 21, MO.

EMERSON ELECTRIC
MOTORS • FANS APPLIANCES

fuel oil & oil heat

of Therm-O-Glo heat reflecting material to the chamber floor. Other steps involve matching oil and air spray patterns, addition of an Econ-O-Head to the burner, exact adjustment of draft conditions and checking to see that the chimney is not pulling excessive heat.

The entire job is backed by a certificate that guarantees a minimum of 10% fuel saving, with this saving translated into dollars and cents savings for various fuel bills and into interest guaranteed on investments of $80, $90 and $100.

Wayne Folder gives Facts About the 1951 "Dream Home"

AN ILLUSTRATED folder describing a 1951 "dream home" is offered by the Wayne Home Equipment Co., Inc., Fort Wayne 4, Ind. The folder contains floor plans, elevations and engineering data on water supply, water treatment and oilheating installation details for the home.

It was built as a model suburban dwelling, laid out as a 4-bedroom contemporary colonial home. Independent of all city improvements and utilities except electricity, installed home equipment has been sized and matched for operating efficiency and economy with the assistance of home equipment design engineers.

The home is to be featured in advertising in the April issue of *Better Homes and Gardens* and other home and farm magazines, as well as in Wayne's accelerated 1951 merchandising program.

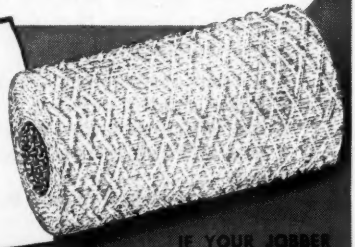
Fulflo FILTERS
REG U S PAT OFF

Every Drop Filtered Again and Again . . .

Every drop of oil that goes through the Honeycomb Filter Tube of a FULFLO Filter is subjected to many successive fine filtrations.

- That is why the oil that reaches the nozzle is always of microscopic clarity.
- That is why FULFLO FILTERS excell in eliminating stuck valves, scored pumps, fouled points, gummed or clogged nozzles and all troubles due to minute oil impurities.
- That is why FULFLO is the best selling Oil Burner Filter . . . they lead in sales because they lead in performance.

R F 4 "Honeycomb" refill tube . . . six in counter carton with gaskets and instructions. Fits all 4 inch FULFLO Filters. Stocked by more jobbers and dealers than any other Oil Burner filter refill.



IF YOUR JOBBER CAN'T SUPPLY YOU WRITE OR WIRE US

COMMERCIAL FILTERS CORPORATION
BOSTON 27, MASSACHUSETTS

New field sales Unit For Honeywell Valves

AN INDEPENDENT field sales organization has been organized by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., for its valve division. The nucleus of the set-up will consist of regional sales managers and a staff of 20 who will concentrate on promoting diaphragm control valves to users and original equipment manufacturers.

Additionally, some of the field staffs now assigned to industrial, commercial and other products of company divisions will be used in the program. The eight regional managers appointed are: R. Schlegel, eastern region; T. L. Smith, mid-Atlantic region; George W. Brown, central region; R. R. Scott, mid-west region; L. Crowe, southeast region; C. F. Woods, southwest manager; W. A. Clements, mountain, north coast and Pacific regions; R. R. Scott, northwest region.

Coleman honored by Engineering Society

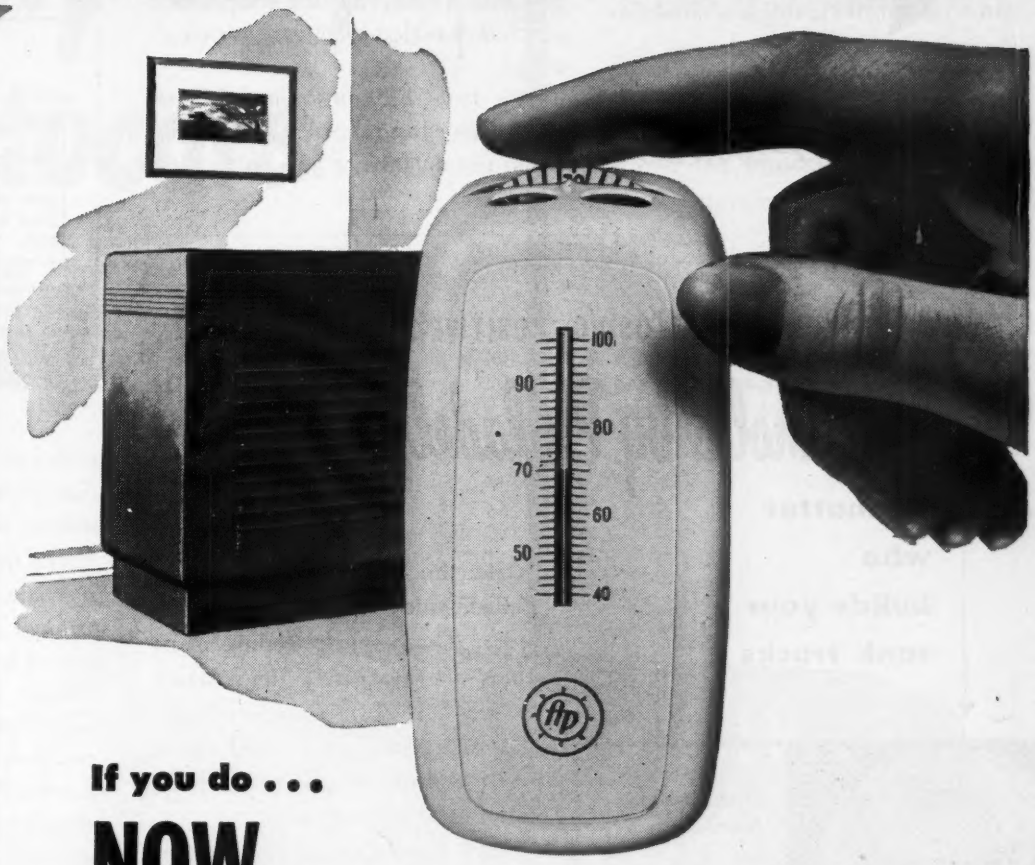
A MERIT AWARD has been given to W. C. Coleman, president, The Coleman Co., Inc., Wichita, Kan., by the American Society of Industrial Engineers for "leadership in research, engineering design and safety in the home heating field."

R. L. Crinnian, national president of ASIE, explained that the awards program was begun last year to acquaint the public with developments which, from an engineering standpoint, are sound, progressive and practical. Development of the Coleman Blend-Air system earned the commendation for the company.

Blend-Air is a forced draft warm air heating system which uses tubes of 3½" diameter to move the heated air to individual room blenders.

DO YOU SELL ONE OF THESE FAMOUS MAKE SPACE HEATERS?

ALLEN'S
BARNES
BEYER
COLE HOT BLAST
COLEMAN
COLEMAN *(Canada)*
CREST *(Canada)*
CUSTOM-AIRE
DUO-THERM
ENTERPRISE
ENTERPRISE *(Canada)*
ESTATE-HEATROLA
FINDLAY *(Canada)*
FLORENCE
H. C. LITTLE
HERCO *(Canada)*
INTERNATIONAL
JUNGERS
LACO
LONERGAN
MAGIC CHEF
MONARCH
MONARCH *(Canada)*
MONOGRAM
NESCO
NORGE-HEAT
PERFECTION
PREWAY
QUAKER
SAFEWAY
SIEGLER
SILENT FLAME
SUPERFLAME
TORRIDAIRE
WASHINGTON FRUGAL



If you do . . .

NOW YOU CAN EARN EASY ADDITIONAL PROFITS BY SELLING AUTOMATIC HEAT CONTROLS

Yes, if you sell one of the famous-make space or trailer heaters listed here you can offer every customer the luxury of true automatic, thermostatically controlled heat! This means easier selling, because you can offer comfort and convenience equal to the most expensive kind of heating, with no wasted heat — and substantial fuel savings!

What's more, this easy-to-sell comfort means ADDITIONAL PROFITS for you. Write now for Bulletin T-2 on A-P Comfort Controls.

EASY TO INSTALL

There's an A-P Electric or Mechanical Comfort Control actually engineered to fit these heaters. Just mount conversion top on present manual control; connect to thermostat and transformer. Mechanical thermostat even eliminates wiring!

DEPENDABLE Controls

Famous for completely reliable service . . . in oil heating . . . gas heating . . . refrigeration.

A-P CONTROLS CORPORATION

(formerly Automatic Products Company)

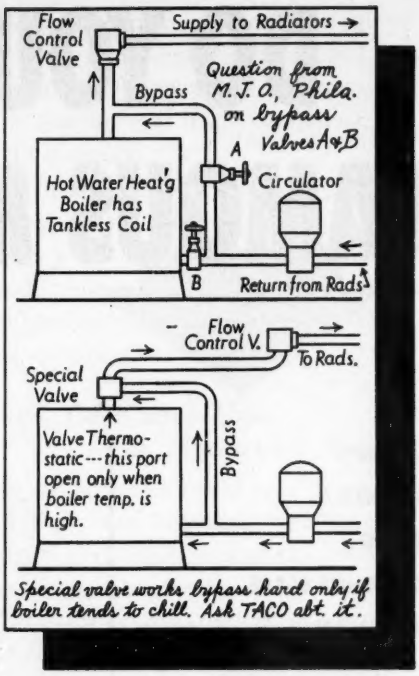
2458 N. Thirty-second Street • Milwaukee 45, Wisconsin • In Canada: A-P Controls Corporation, Ltd., • Cooksville, Ontario

fueloil & oil heat

Reader's Problems

Q. From time to time we have experienced difficulty with tankless water heaters, caused primarily by the small amount of water in some boilers and the lag in the operating control. The circulator rushes the hot water out of a boiler before the reverse-acting control can stop it, and the boiler temperature thus is reduced below the point at which the tankless coil gives hot enough water.

We have been installing by-pass loops in an effort to correct this. As you see in our diagram, a gate valve is installed at location "A." It now appears that perhaps we should consider installing this valve at location "B."


Flow Control Valve
Supply to Radiators →
Question from M. J. O., Phila. on bypass Valves A & B
Bypass
A
Circulator
Hot Water Heat'g Boiler has Tankless Coil
B
Return from Rads.
Flow Control V.
To Rads.
Special Valve
Valve Thermostatic — this port open only when boiler temp. is high.
Bypass
Special valve works bypass hard only if boiler tends to chill. Ask TACO abt. it.

The theory behind this by-pass loop and valve is that the water circulating through the system would follow the path of least resistance and make a continuous circuit through the by-pass loop (same pipe size as the circulator and flow control valve) and through the boiler. However, if this valve is moved to location "B," and the valve is closed partially, then due to the increased friction water will be forced up the by-pass loop and through the flow control valve rather than through the heating boiler. Adjustment of the valve will equalize the flow so the temperature is maintained in the boiler and the radiators are heated gradually.

In your opinion, is location "B" preferable to location "A" for this valve?

M. J. O., Philadelphia.

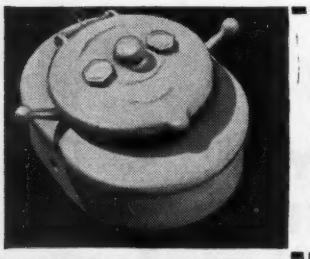
A. The resistance through the boiler may be greater or less than the resistance through the by-pass loop you describe, depending on the characteristics of the boiler. Many boiler models have less resistance than such a loop; with valves "A" and "B" left out, using the hook-up you show would cause more water to circulate through the boiler than through the loop.

Using a loop without either valve, water from the circulator will flow up-

FOR QUICK-OPENING, TIGHT-CLOSING, POSITIVE-LOCKING MANHOLES

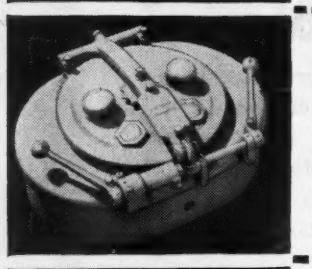
SPECIFY "Manholes by Philadelphia Valve"

no matter who builds your tank trucks



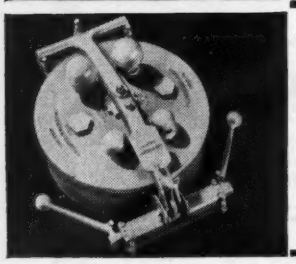
Standard Manhole

Size 12" x 16" with 6½", 8", or 10" fill opening. A slight turn of locking ring opens and closes cover.



Self-Closing Manhole

Size 12" x 16" with 10" fill opening. Self-closing, with positive locking device. Opened by raising lever on either side.



14" Diameter Self-Closing Manhole

For heavy fuel-oil tanks. Self-closing, with positive locking device. To open, lift either lock arm and raise cap.

Write the words "Manholes by Philadelphia Valve" into your order. These quick-opening manholes are absolutely tight. They surpass every fire underwriter's standard. They open and close easily and quickly. They are built to outlast the tank.

Each type of manhole is simple, strong, and foolproof. Covers are leakproof. Covers and plugs are of malleable iron or heat-treated aluminum. No cast iron is used. "5-in-1" vents automatically close if truck upsets, and will release under 6 lbs. pressure to prevent explosion in case of fire. Gaskets are easy to keep tight.

Philadelphia Valve manholes are standard with many major oil companies from coast to coast. Make them standard on *your* tank trucks, too!

Send for catalog 170 for descriptions and engineering drawings of all Philadelphia Valve Company products.

PHILADELPHIA VALVE COMPANY

3413 Aramingo Avenue, Philadelphia 34, Pa.

Pacific Coast Distributors:

Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, California

Howard Supply Co., 5125 Santa Fe Avenue, Los Angeles 11, California

10 POINTS OF PROFIT

NO. 1...

Heavy-duty Autocars haul big loads...

On the highway they haul all the law allows. Off the highway they haul mighty loads of such cargo as shale, rock, coal, logs and heavy machinery. Autocars transport material in volume. They make every trip count. Superbly engineered, heavy-duty Autocars offer every owner the opportunity to maintain a profitable ratio between payload and cost.

A Model 90 Autocar owned by Hanney Fuel Oil Company, Brooklyn, N.Y. It easily hauls 2,400 gallons in its four-compartment tank.

Autocar Trucks

1...HAUL BIG LOADS
2...Control the load
3...Have engineered balance
4...Are dependable
5...Are economical
6...Make man-hours productive
7...Keep pace with traffic
8...Are virtually custom built
9...Have extra power when needed
10...Last longer

The Autocar Company, Ardmore, Pa. • Established 1897 • Factory Branches and Distributors from Coast to Coast

fueloil & oil heat

wards through the loop and through the boiler. If the loop is of too large a size for the particular boiler, excessive water would flow through it, and with the circulator running continuously the boiler would tend to overheat and the burner therefore would be stopped and started by the high limit control on the boiler. Even with the radiators relatively cool because they receive only part of the heat the boiler could give them, the full power of the burner would not be used to heat the house. Therefore you should not aim for this type operation. Under these conditions (with the loop of such a large size that when wide open too much water goes through it), a valve is needed at "A" to permit adjustment that forces more water through the boiler and causes less water to go through the loop.

If on the other hand too much water goes through the boiler using a loop without either valve, the flow through the loop will be insufficient to prevent rapid chilling of the boiler in the way you describe when the circulator starts and runs five minutes. Under these conditions, a valve would be needed at location "B" to force more water through the loop.

Use this line of reasoning to find out if the valve should be at "A" or "B." Keep wide open any valve in the particular system. If starting the circulator chills the boiler excessively, you know a valve is needed at location "B." If with the circulator running continuously for, say, two hours the burner is held idle much of the time by its high limit control and the radiators fail to become satisfactorily hot, then you need a valve at "A."

Special thermostatic valves made to solve your problem actually do a much better job in several ways than can be done by any arrangement of ordinary valves. Write to manufacturers of hot water system specialties to obtain information on such valves.

* * *

Q. *We have been asked by one of our customers who is a large user of domestic hot water at 170° at the outlets and with 180° temperature at the boiler, the cost of heating 1,000 gallons of this with number 5 fueloil. Would greatly appreciate this information.*

L. C. E., Bridgeport, Conn.

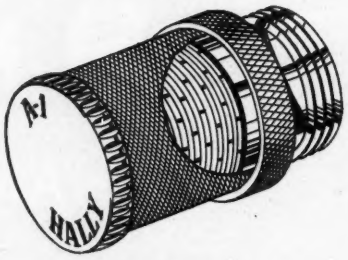
A. Heating cold water at 50° to 180° in the boiler room requires 130 Btu per pound of water or 1,053 Btu per gallon of hot water (130 x 8.1), taking the hot water at 8.1 pounds per gallon. Multiplying by 1,000, you need 1,053,000 Btu's for 1,000 gallons of hot water. Divide by 70% if you expect this high overall efficiency from the water heating equipment, and you find that 1,504,000 Btu's are needed to provide 1,000 gallons of hot water. (1,053,000 divided by .7 comes to 1,504,000.)

Allowing about 140,000 Btu's per gallon of fueloil, divide this number into 1,504,000 and you obtain 10.7 as the number of gallons of fueloil needed on this basis to provide 1,000 gallons of hot water. You would need 15 gallons of fueloil instead if the efficiency of the equipment is 50%. True, rarely can you expect equipment efficiency as high as 70% from a water heating layout. However, a modern, well-insulated set-up that gives low stack temperature and high CO_2 will give at least 50% efficiency.

HALLY FILTERS

NOW MADE AND SOLD EXCLUSIVELY BY

DELAVAN



In more than a year of careful field testing, Hally Filters have shown amazing efficiency in preventing nozzle clogging.

Openings in the Hally Filter are only one-half to one-fourth the size of the openings in the wire screen strainers they replace.

Thus, the Hally Filter will hold back all foreign matter that is likely to clog the nozzle.

THE FILTER THAT PREVENTS NOZZLE CLOGGING

DELAVAN CAN NOW SUPPLY NOZZLES WITH HALLY FILTERS ATTACHED

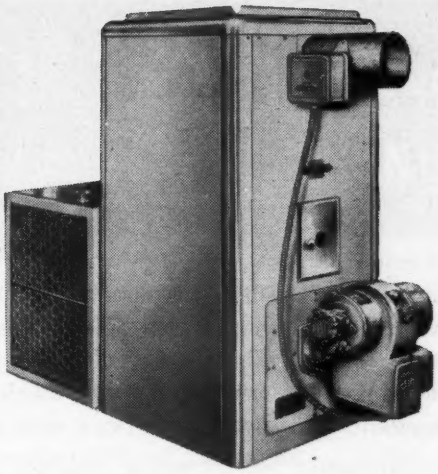
HALLY FILTERS AVAILABLE FOR ALL MAKES OF SMALL CAPACITY NOZZLES — 10 OF ONE SIZE PER BOX.

WRITE FOR BULLETIN #551

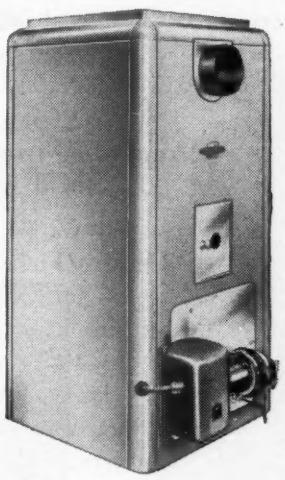
DELAVAN MANUFACTURING CO.

3009 SIXTH AVE., DES MOINES 13, IOWA

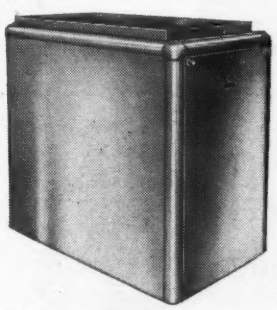
MEMBER OIL HEAT INSTITUTE OF AMERICA OHI



Delco-Heat "OPC" Conditionairs—a value-priced line of forced air furnaces with pressure atomizing oil burners. Blower filter unit may be bottom or back mounted. "Reverse flow" model, and de luxe model with matching blower and furnace units, also available.



Delco-Heat "OVC" Conditionairs—especially low-priced models for the builder and small home markets. Two stage vaporizing oil burners. "OVC" Conditionairs come in both gravity and forced air models.



Delco-Heat "DA" Conditionairs—the finest oil-fired, forced warm air furnaces available! Five models in capacities from 85,000 to 200,000 Btu output. Powered by famous Delco-Heat "Rotopower" oil burners.

Oil-fired Boilers | Stokers | Gas Conditionairs | Gas Burners | Oil Burners

Also manufacturers of electric water systems for farms and homes

The Delco-Heat line offers features that sell—at prices that mean profits!

A new home heating unit isn't an "everyday" purchase to your customers—it's a major investment. Naturally they look for a name they can trust. They insist on top quality and dependability. And they want all this at the lowest possible cost.

When you sell Delco-Heat Conditionairs, you are able to offer unmatched quality and dependability. *Yet Delco-Heat units are priced competitively.*

Yes, it's easier to sell the products of a manufacturer whose research, engineering and advertising facilities will keep those products out front. And Delco Appliance, a division of General Motors, is just such an organization.

Delco Appliance, following the General Motors' policy of "more and better things for more people," manufactures the kind of automatic heating equipment that customers want—at prices they can afford to pay. This policy is one on which each Delco-Heat Retail Distributor can base a sound business for himself.

GENERAL MOTORS DELCO-HEAT

If you are interested in more information about a Delco-Heat franchise, send the coupon below.

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION, Dept. FO-21
General Motors Corporation, Rochester 1, N. Y.

Please send me information about a Delco-Heat franchise.

Name _____

Firm Name _____

Street _____

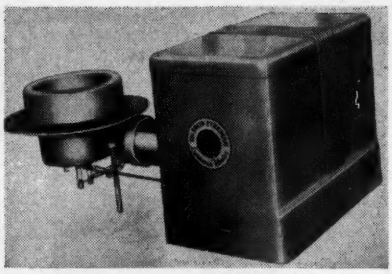
City _____ *Zone* ____ *State* _____

fueloil & oil heat

New Products

Iron Fireman Vortex Oilburner is improved

AN IMPROVED MODEL of Iron Fireman's Vortex oilburner has been announced, with capacity from 1.0 to 2.5 gph and featuring its ignition transformer mounted on the main frame of the burner instead of on the 1/8 hp motor, which is permanently sealed and self-lubricating. The burner is constructed of heavy pressed steel, sturdily welded, with burner housings accurately machined to maintain shaft alignment.



Each of the three legs on the chassis may be adjusted independently.

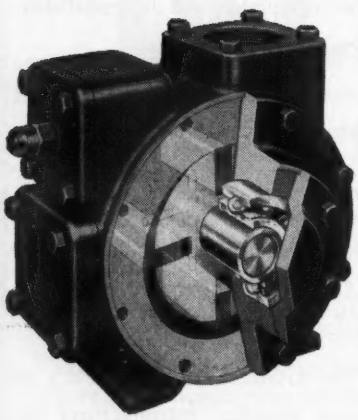
The Vortex oilburner produces a whirling vortex of air which mixes with the oil spray from a vertical nozzle to form a flat, bowl-shaped radiant flame. Heat, thereby, is released above the grate line where it blankets the hearth and combustion chamber side walls. Moving parts and adjustments are located in cool air, rather than below the combustion chamber.

Made by: Iron Fireman Mfg. Co., 3170 West 106 St., Cleveland 11, O.

THE TEST OF THE BEST IS

Performance!

. . . advanced design, quiet operation, economy, flexibility of installation, rugged construction, efficiency. Judge truck pump leadership on these or your own standards—and you'll agree—



IN TRUCK PUMPS

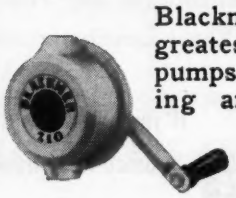
IT'S BLACKMER

Decide for yourself—compare them ALL. Get complete details on BLACKMER TRUCK PUMPS in "Bulletin TP3." See why now, more than ever in 46 years, petroleum "marketers" are specifying BLACKMER.

Note the vane placement in the phantom pump above. Vanes are self-adjusting for wear. If the vanes eventually wear to the extent of lessening efficiency, they may be easily replaced at little cost.

IN HAND PUMPS

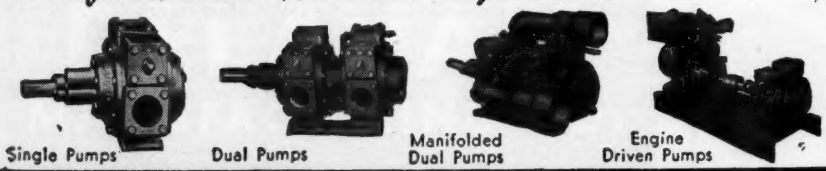
IT'S BLACKMER



Blackmer builds the world's greatest line of rotary hand pumps for lube oil dispensing and farm equipment refueling from drums and underground or skid tanks.

Because Blackmer Truck Pumps are rotary, positive displacement and self-priming, they serve every known service to which truck pumps can be put, some of which other types cannot handle. Because Blackmer supplies all popular sizes up to 200 g.p.m., your truck pump needs can best be served by Blackmer.

Write for Bulletin TP3 describing Blackmer Truck Pumps

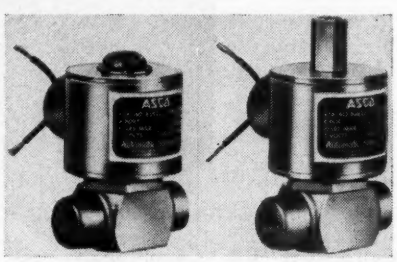


Single Pumps | Dual Pumps | Manifolded Dual Pumps | Engine Driven Pumps

BLACKMER PUMP COMPANY – GRAND RAPIDS, MICHIGAN

Announce two ASCO Midget solenoid Valves

ASCO two-way and three-way packless solenoid valves, named "Midget Valves" because of their extremely small size, have been announced. The two-way valves are available in normally closed or normally opened models; three-way valves are of the universal type, applicable to any three-way requirement regardless of the direction of flow or points of pressure application. Pipe sizes of the two-way models are 1/8" and 1/4", normally closed, and 1/8", normally open. Permissible pressures range up to 300 lbs. psi for AC



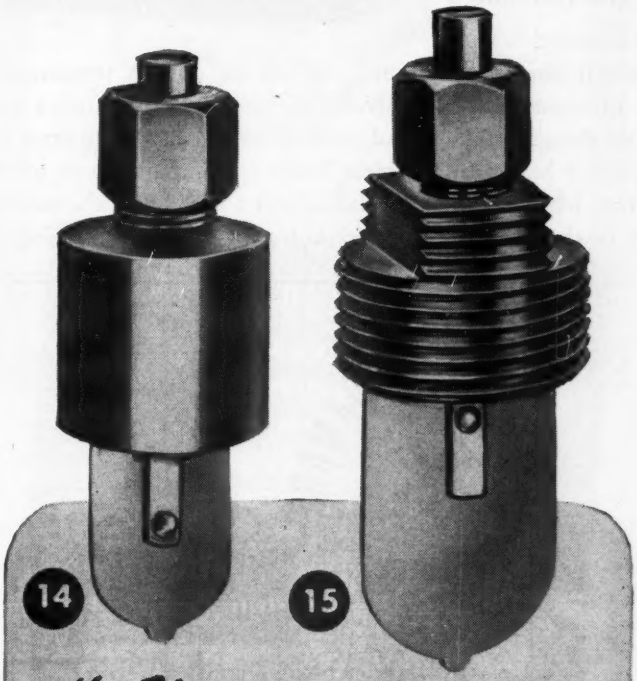
and up to 250 lbs. psi for DC. For the three-way pipe size is 1/8" only, with permissible pressures up to 125 lbs. psi for AC, 50 lbs. psi for DC.

Valve bodies of both are machined from bar stock in brass or stainless steel, with crown type valve seats integral with the bodies. Discs are of flat resilient composition, moving elements consist of solenoid core, disc and disc retainer permanently assembled in one

MAID-O'-MIST BALANCING VALVE ADAPTER UNITS

Make Any Copper, Bronze or Cast Iron Tee a Balancing Valve.

Stocks of square head cocks or balancing valves are no longer necessary. These new units, quickly soldered or sweat-fitted into copper and bronze tees or threaded into cast iron tees, regulate the flow of hot water through radiators, convectors, baseboard panels, radiant coils, return mains and branches. Precision made of non-ferrous metals.



***The New* MAID-O-MIST BALANCING VALVE Adapter Unit**

NO. 14 BALANCING VALVE ADAPTER UNIT
for 3/8", 1/2", 3/4", 1" nominal copper or bronze pipe size.

NO. 15 BALANCING VALVE ADAPTER UNIT
for 1/2" or 3/4" cast iron tees.

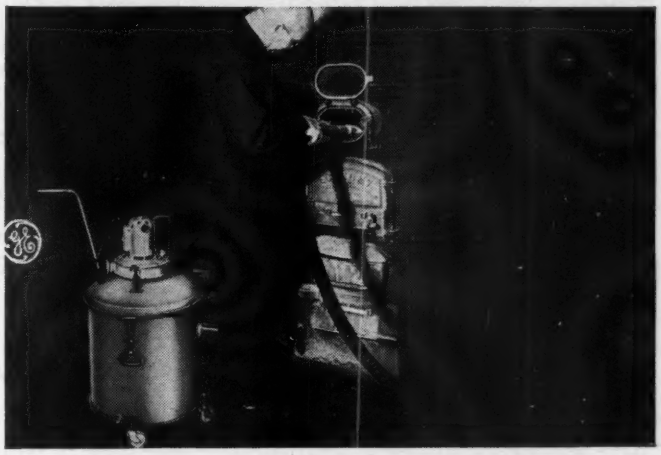
PRICES AND DETAILS FROM YOUR JOBBER, OR WRITE DIRECT TO

MAID-O'-MIST INC.

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

3221 N. Pulaski Rd., Chicago 41, Ill.

Keep Your Service Crew *Busy the Year Round*



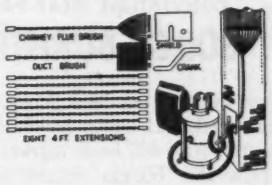
Most fuel companies and heating equipment people recognize the importance of Furnace Cleaning as a profitable business. Many service companies occupied almost entirely in the servicing and repair of heating plants find a field of greater profit in adding furnace cleaning to their services.

In summer, the normal off-season period, furnace cleaning keeps your service crews profitably busy.

General Electric Furnace Cleaners are compact, easy-to-handle and built for extra-heavy duty. They convert quickly to powerful blower action for loosening soot and grime in stubborn corners. Easy mobility makes a hit with cleaning crews. You get more work jobs and can keep busy the year round.

G-E Chimney Cleaning and Air Duct Equipment

Makes job go faster. Prevents soot from escaping into cellars. Revolving handle and vacuum hose fit through special shield that scoops up falling soot. Set includes Shield, Crank, Chimney Flue Brush, Duct Brush and 32 feet of extensions.



Mail coupon for details.

Furnace and Boiler Cleaners

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-1628
1285 Boston Ave., Bridgeport 2, Conn.

Without obligation, please send complete details on heavy-duty cleaning equipment.

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CITY ..... STATE .....

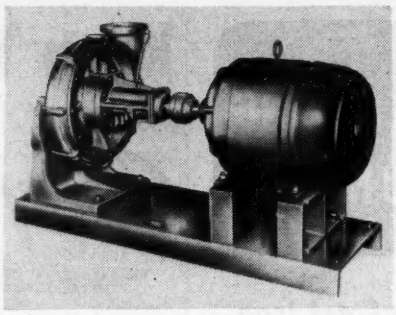
element and precision wound valve springs made of non-corroding material. The valves may be mounted in any position. All internal parts are accessible without removing valve body or disturbing electrical connections.

Made by: Automatic Switch Co., 379-C Lakeside Ave., Orange, N. J.

Gilbarco Roto-Prime Pumps In Sizes up to 500 Gpm

A NEW LINE of Gilbarco Roto-Prime self-priming centrifugal pumps is available in capacities from 50 to 500 gpm. The pumps are to be used in tank car and transport loading or unloading, as well as for loading and barrel-filling and similar purposes. Furnished complete with a base, electric motor, coupling, built-in check valve and mechanical seal.

These Roto-Prime models are said to have the advantages of a centrifugal during normal pumping, plus those of a positive-displacement pump when priming is required. No priming reservoir is present in these single-stage, single-suction volute type pumps. Self priming is accomplished by a small



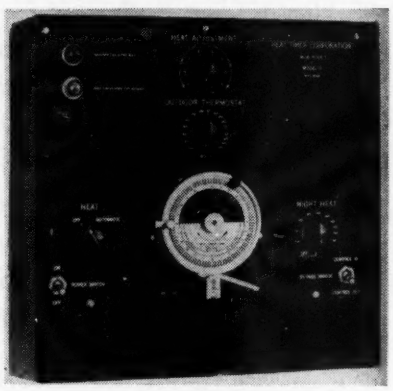
variable capacity, vane type 1750 rpm positive displacement pump mounted inside the main pump housing and directly connected to the main shaft. The priming pump automatically goes into action when needed and at other times is in neutral position.

Made by: Gilbert & Barker Mfg. Co., West Springfield, Mass.

Heat-Timer Control is Outside weather-actuated

HEAT-TIMER weather-actuated heating control model E consists of three separate units electrically interconnected—a weather head, indoor element and a control panel. The weather head is an electronic thermometer, which is installed on the outside of the building. Its function is to transmit to the control panel the outdoor temperature.

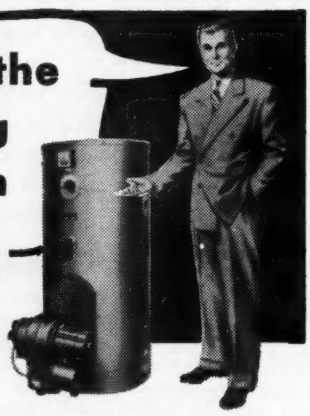
An indoor element also is connected to the control panel to signal that heat has circulated to the farthest point in the heating system and that the timing of heat can begin. The control panel is made up of a program clock, which controls the beginning and end of the heating day; an outdoor thermostat



dial, set at the outside temperature above which no heat is required; a heat adjustment dial which synchronizes the Heat-Timer to the building in which installed and a night heat thermostat, which automatically turns the heat on

SELL 90% of the Home Heating Market...with ALDRICH

CONVERTIBLE HEAT-PAK BOILER-BURNERS



Nine out of ten new homes heat with oil or gas. With Aldrich you sell both markets — plus the oil-gas industrial market.

Aldrich Boiler-Burners come in seven sizes — from 100,000 to 808,000 BTU/hr. All are interchangeable between oil and gas, though the 514,000 and 808,000 sizes must be originally gas fired to have interchangeable burners.

Available Gas-Fired

Meet more requirements with less inventory . . . Cash in on oil units now, cash in again with conversions when gas is available.

Aldrich Boiler-Burners are vertical-type, compact, efficient, beautifully finished; shipped fully assembled, ready to set in place and connect.

Profit with ALDRICH — Get Details Today. Write or wire for Heat-Pak facts, full specifications.

The ALDRICH Company

A Subsidiary of Breeze Corporations, Inc.

103 East Williams St. Wyoming, Illinois

ANOTHER BREEZE MARK PRODUCT

Use High Capacity "SAFETY-FILLS"

Buckeye's high capacity No. 890 "Safety-Fill" nozzle prevents property damage caused by fill-pipe overflow. It stops spilling by shutting off automatically at the main valve when fuel oil covers the end of the spout. Deliveries are quicker and safer, you keep customer good will. Use Buckeye's No. 890 nozzle. Write for details.

Buckeye "SAFETY-FILL" NOZZLES

No. 890

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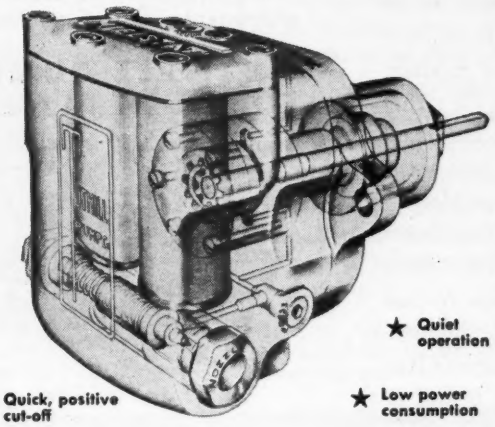
INSIDE STORY OF PROVED PERFORMANCE

★ Strainer removable without spilling

★ Cast iron pump unit encased in 45,000 p.s.i. tensile strength zinc alloy



★ Quiet operation

★ Quick, positive cut-off

★ Low power consumption

★ Light weight

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Proved by thousands already in service, this perfected Tuthill Fuelstat sets the pace for dependable pumping equipment. All working parts are made of cast iron and steel with high grade (99.99+% pure) zinc alloy body to obtain the ultimate in toughness, durability, corrosion resistance and leak-free performance.

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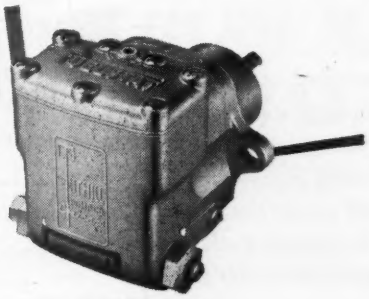

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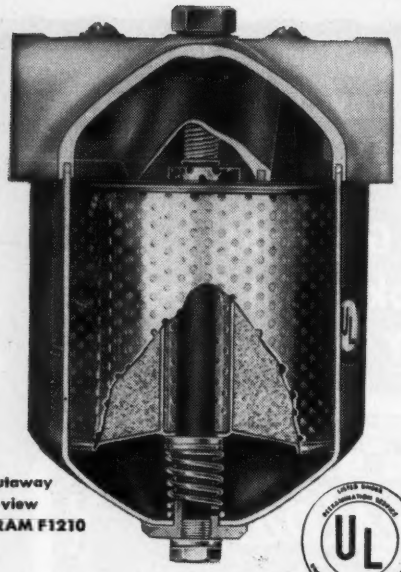

Cutaway view FRAM F1210

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FRAM FUEL OIL FILTERS

Filters the oil clean through an entirely new development • Removes dirt, rust, scale, water • Assures steady flow of clean oil to the burner • Protects pump valves and nozzles • Reduces service expense and needless, troublesome calls • Easy to install • Replacement cartridge builds repeat profits • Available in capacities of 2000, 4000, 6000 gallons of oil consumed per year. Send for complete details. Find out how you can profit with Fram.

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Providence 16, R. I.

Please send me complete details about Fram Fuel Oil Filters for Oil Heating.

NAME_____

COMPANY_____

ADDRESS_____

during the night off-period when the outdoor temperature drops below the setting of the night heat dial.

A series of signal lights on the panel constantly indicate facts about the heating system.

Made by: Heat-Timer Corp., 160—5th Ave., New York, N. Y.

Sludge-Ban added to Parke-Hill Chemicals

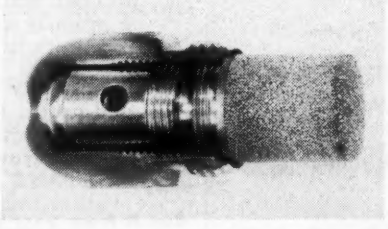
SLUDGE-BAN CONCENTRATE has been added to the Parke-Hill line of heating chemicals, with one gal. said to be sufficient to treat 20,000 gals. of fuel-oil. It is a petroleum-based product, containing no caustics, has a Ph rating of 7.1, is neutral and does not react with metals, according to reports of the United States Testing Laboratories.

In action Sludge-Ban emulsifies water concentrates, suspends them within the oil and allows them to pass through the oilburner strainer and nozzle. The compound also dissolves bottom sludge in the tank and is said to be beneficial in preventing rust within the fueloil tank.

Made by: Parke-Hill Chemical Corp., 57 South 6th Ave., Mt. Vernon, N. Y.

Monarch nozzle Filter Employs porous Bronze

A NOZZLE FILTER developed by Monarch, employs a porous bronze filtering element. This is the first application in commercial production of this type of material, well known and widely used in the automotive field. The usual strainer for small capacity nozzles has been made mostly of extra fine mesh screen, which usually required careful



handling. The porous bronze filter, by way of contrast, is described as being rugged, compact and joined to the nozzle with a metal-to-metal seat.

The filter has a porosity equivalent to 200 mesh screen, and passes the oil through a labyrinth to minimize the passage of dirt. The present model is

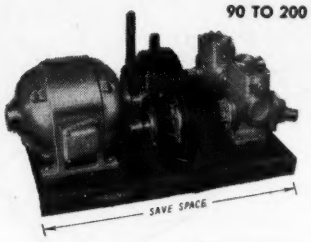
Granco

SECURITY FOR SALE!

Profits of the oil industry need security! Granco equipment, backed by 34 years of specialized experience, secures profits from the hatchet-work of continual breakdowns, costly replacement, wasted manhours.

MULTIPLE PUMPS FOR BULK PLANTS

SIZES 90 TO 200 GPM

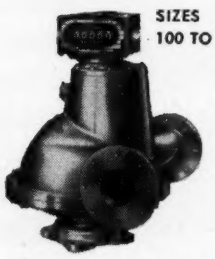


Inquire about new "fool-proof" alignment and other new and improved economy features.

fast flow

LOADING RACK METERS

SIZES 100 TO 1400 GPM



With fewer parts, lower friction loss, high reserve capacity, Granco Meters secure your profits at less cost to you.

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GRANBERG CORP.

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Granco bulk plant pumps ☐

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GRAND RAPIDS FURNACE CLEANER

Act Now! Get in on this year's cleaning profits. *Order a Grand Rapids Furnace Cleaner.*

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IT'S THOROUGH — High velocity suction completely removes ashes, soot, scale and dirt from every type of heating plant.

IT'S COMPLETE — A packaged unit with practical cleaning attachments designed for fast, easy cleaning.

IT'S PROFITABLE—The trouble-free operation and speedy service of the Grand Rapids Furnace Cleaner puts extra profits in your pockets.

Send today for complete information about the Grand Rapids Furnace Cleaner.

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"The Masterpiece of Oil Burners"

For:

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MODEL A

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BURN-RITE PRODUCTS CO.

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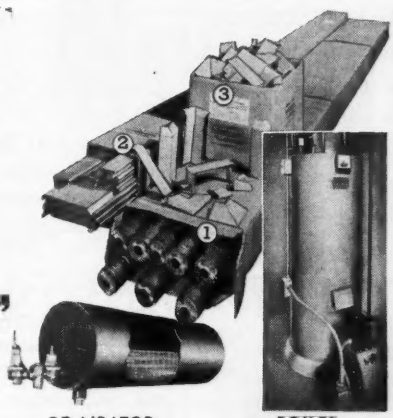
When You Handle The COMPLETE "FLOORLEVEL" HOT WATER BASEBOARD RADIATION PACKAGE



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BOILER BURNER

FLOORLEVEL

Whether you handle the Floorlevel package alone . . . or the complete General Automatic Hot Water Baseboard Radiation Heating System . . . you'll find G/A offers a real profit deal.

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Since 1923

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2300 SINCLAIR LANE **BALTIMORE 13, MD.**

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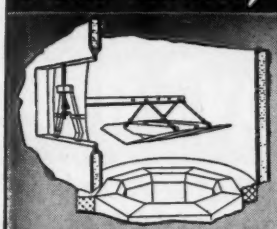
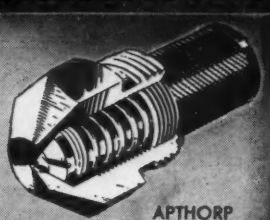
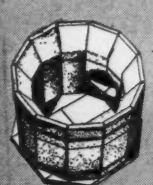


Boston Chrome Steel "HANG-DOWN" BAFFLE

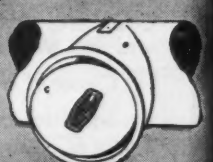


APTHORP True Alignment OIL BURNER NOZZLE

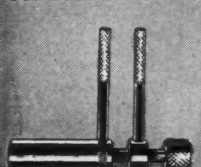
BOSMACO



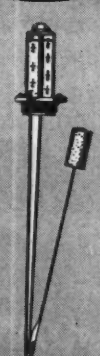
Instant-Glo COMBUSTION CHAMBER



The Boston Standard DRAFT CONTROL



Ideal NOZZLE EXTRACTOR



Clearview OIL TANK GAUGE

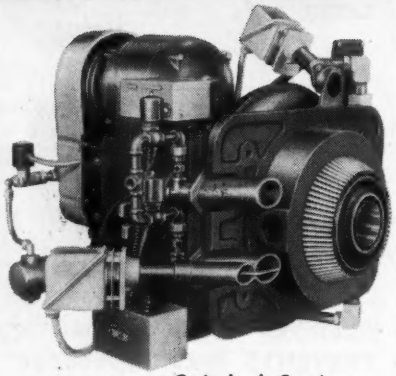
BOSMACO Apthorp NOZZLE KIT

WRITE FOR COMPLETE INFORMATION

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

ENTERPRISE
Combination
Oil-Gas
Burners



Satisfied Customers Tell the Story

"Maximum Efficiency when on oil or gas"

"This burner obtains a high % CO_2 on gas"

"Safest, easiest to light off"

"Can change from one fuel to the other in 1 minute"

Whether you buy, sell, install or service burners, you can rely on Enterprise for long-term economy, unmatched efficiency. Compare—feature for feature—and see why Enterprise is the

Choice of Heating Experts

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Enterprise
DEPENDABLE
Oil Burners

ENTERPRISE ENGINE & MACHINERY CO.
A Subsidiary of General Metals Corporation
18th & Florida Sts., San Francisco 10, California

recommended for use on fractional gallonage nozzles, although Monarch has conducted tests to indicate that there is no restriction to flow up to several gph. Porous bronze filters are not being offered as standard equipment only because production is limited by the present copper situation.

Made by: Monarch Mfg. Works, 2501 East Ontario St., Philadelphia 34, Pa.

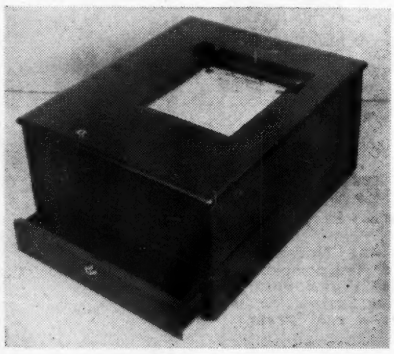
Tankit announces Fueloil Deodorant

NEUTROL fueloil deodorant has been announced, guaranteed to absorb all fueloil odors quickly and permanently. Neutrol is described as being non-toxic, non-volatile and non-inflammable and is furnished in the form of a dry powder, packaged in a dispenser-type can.

Made by: The Tankit Co., 17 Shephard Ave., Newark, N. J.

Standard Form-Flow is Electric operating Register

THE DESK ELECTRIC Form-Flow Register is the only single-unit electric register on the market and operates on the pin-feed principle. The pin-feed control makes fast feeding and ejecting of forms positive with no slipping or buckling and assures registration and alignment of all parts in the set of forms on the writing table. The registers are finished in business machines gray, can be set on top of a desk or counter or countersunk so that the



writing table is flush with the counter surface.

Designed to handle handwritten business forms in as many as eight parts, the registers issue seven parts and refold the eighth copy into a locked-in compartment. Adaptable to a variety of systems, models are avail-

TO CHECK RELATIVE HUMIDITY REMEMBER

Bendix-Friez

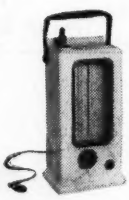
MAKES the RIGHT INSTRUMENT at the RIGHT PRICE for EVERY JOB!

Model 185 Hygrodial Precision Humidity and Temperature Indicator

Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5½" wide, 1⅝" deep.

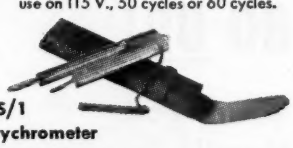
Model 160 Portable Humidity and Temperature Recorder

3" x 5" charts, 10 or 30 hour records. Modern design...handy for small space and difficult locations ... built to meet unusual conditions.



Model 573 Motor Aspirated Psychrometer

Designed to determine wet and dry bulb temperature with laboratory accuracy—Motors supplied for use on 115 V., 50 cycles or 60 cycles.



Model S/1 Pocket Sling Psychrometer

A small, low cost instrument. Thermometers graduated in 1° increments from +35° F to +110° F. Furnished complete with case and psychometric slide rule.

Model 594 Hygrothermograph

The foremost relative humidity recorder for laboratory, factory, and office use. Scientifically designed for accuracy and dependability.

Model HA/2 Hand Aspirated Psychrometer

Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.

Model 550 Sling Psychrometer

Manufactured to U. S. Weather bureau specifications. Thermometers graduated in 1° increments from −20° F to +120° F. or −35° C to +49° C.

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DIVISION OF
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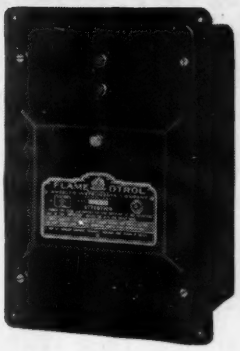
Bendix AVIATION CORPORATION
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

instrumentality

DON'T PLAY WITH FIRE... specify FLAME-OTROL



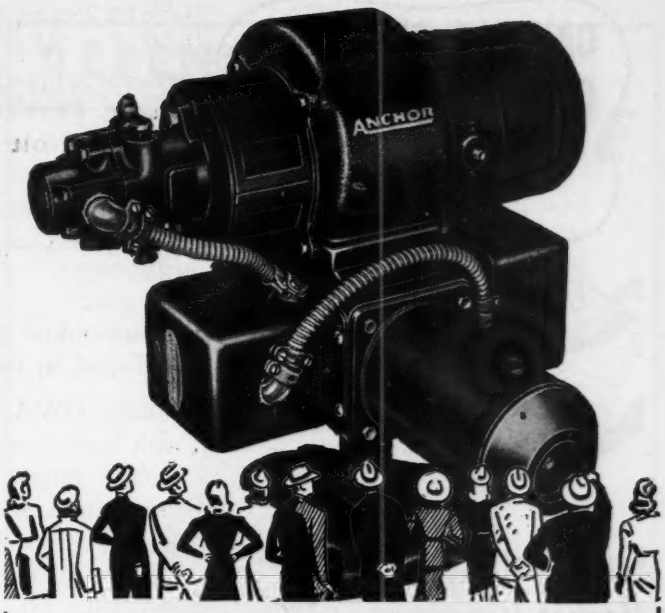
Approved by Associated Factory Mutual Laboratories

Underwriters Laboratories

You can't afford to have less than the best in combustion safety. Specify the new Wheelco 1300 Flame-otrol—a compact completely engineered package with all these advantages—Instantaneous protection... waiting period not subject to human error...shut down or repeat of "lighting-off" cycle at operator's discretion...automatic check of all internal components to insure safe "lighting-off"...selective and adjustable timing programs for ignition cycles, purging and preventilating...constant visual indication of burner system operation...

Write for Bulletin F2-2, Wheelco Instruments Company, 868 W. Harrison Street, Chicago, Illinois.

wheelco *electronic controls*



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Because This New, Improved Burner Reduces Fuel Costs As Much as 36% a vast new field of prospects is open to you.
Many of your "borderline" prospects . . . prospects who wanted oil heat but were afraid of the cost . . . can now become your satisfied customers. This new Anchor Oil Burner *proves* it reduces fuel costs an average of 25% . . . in many cases as high as 36%. What's more, an entirely new SOLENOID FUEL UNIT assures positive, split second cutoff of fuel whenever burner turns off . . . thus eliminating after-fire smoke and soot. Burner mounted controls saves you expense in wiring. Write for details.

ANCHOR DIVISION, STRATTON & TERSTEGGE CO., Inc.
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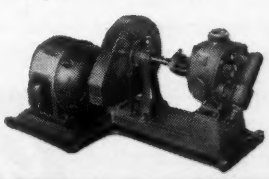
IT MAKES NO DIFFERENCE...

Regardless of whether the liquids you handle are highly volatile or extremely viscose, Viking pumps them all . . . efficiently and consistently. It is only necessary that you instruct us as to what type of liquid you are pumping.

The VIKING ROTARY "GEAR WITHIN A GEAR" PUMP handles ALL clean liquids, regardless of viscosity . . . and what's more, you'll find it a thrifty, willing worker with low power requirements and efficient operation.

Write for Free Bulletin 51SEE.



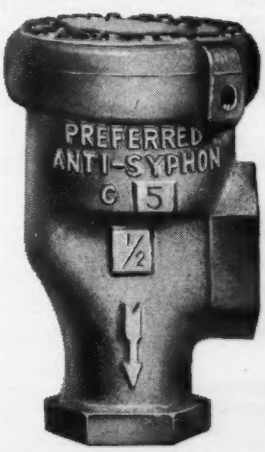
VIKING AN HONORED NAME IN PUMPING

VIKING PUMP CO. Cedar Falls, Iowa — See Our CATALOG IN SWEETS

PREFERRED Anti-Syphon Valves

PR-194

APPROVED BY UNDERWRITERS' LABORATORIES, INC.



Permits pumping of oil but closes to prevent syphoning in case of suction line break.

FOR OILS UP TO No. 5
Valves C5 and C10 are available in ⅜" and ½" sizes.

FOR OILS UP TO AND INCLUDING No. 5
Valves B5 and B10 are available in ¾" and 1" sizes. (1" size is built up from ¾" size with fittings.)

FOR OILS UP TO AND INCLUDING No. 6
Valve A is available in 1¼", 1½" and 2" sizes for 5 or 10-foot head pressures.

You can be sure of the best when you order from Preferred, the oldest and the largest manufacturer of anti-syphon valves.

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Sells Fast...
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You, more than anyone else, have an inside track to get extra income from the sale of Klemm Oil Filters. You know *who* gets oil, *how* they use it, and *which* oil-fired utilities *need* a Klemm filter. You can sell Klemm Oil Filters easily . . . and make a good profit on every sale. What's more, you'll get extra business too from the sale of Chemistone filter elements.

Model 430 G

Klemm Oil Filters remove all water, dirt, sediment, rust, and all foreign matter from fuel oil . . . help make customers happy with the oil you sell. Metal bowl units listed Underwriters' Laboratories. All sizes available for every filtering need.

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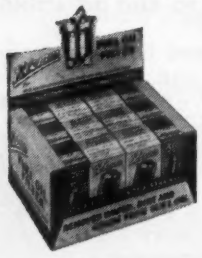

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Klemm

AUTOMOTIVE PRODUCTS CO.

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able for 26 sizes of forms from 4-5/16" x 3¼" to 11" x 11". The model illustrated is equipped with a full-sized cash drawer, which opens only when the key is in the lock or when a lever is tripped.

Made by: Standard Register Co., Albany & Campbell Sts., Dayton 1, Ohio.

Motorstokor oilfired Furnace Offered in two bonnet Ratings

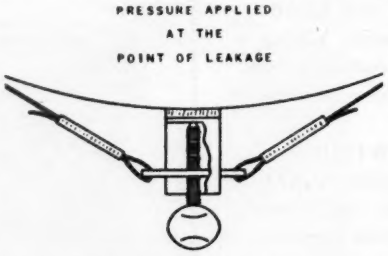
MODELS OWA 85 and OWA 115, with bonnet ratings of 100,000 and 135,000 Btu/hr, respectively, are additions to the Motorstokor line. These are oilfired models, equipped with high pressure gun type burners, 1.0 and 1.2 gph firing rates. Both models have cabinets which measure 42" wide and 29¾" long. The smaller model has a cabinet 57½" long, the larger, 62½".

Construction features extra heavy gauge steel in the dome, special stainless steel combustion chamber with refractory bottom. Units are completely packaged, equipped with 10⅝" and 12⅝" blowers, driven by 1/6 and ¼ hp. motors.

Made by: Motorstokor Div., Hershey Machine & Foundry Co., Manheim, Pa.

Natco pressure Patch Repairs leaky Tanks

DESIGNED for temporary repair of leaks in fueloil storage tanks the Natco Pressure Patch consists of a metal band, a neoprene patch and an adjustable screw. The patch is centered over the



leak, the metal band passed around the tank and tightened by turning the screw with thumb and forefinger.

The tank band and metal parts are cadmium plated and the patch can be used over and over again. A pressure exceeding 100 lbs. psi can be applied at the point of leakage by screwing up the band tightly. Thin and corroded metal of the tank is said to be reinforced by the patch since it does not

NEW **OIL SHUT OFF VALVES by *Guardian***

Series 1200 Individual Tank Control Valve. Available in ⅜"—½"—¾" male inlet—⅜" and ½" flared and compression outlets.

No. 1900 Oil Filter Valve

No. 1300 Two Tank Control Valve Assembly

No. 1600 Underground Tank Valve

No. 1400 Globe Valve for Oil, Water or Gas

If you think all oil valves are alike, take a look at the new GUARDIAN line of oil control valves, designed for oil line service . . . built with precision . . . accurately machined to perfect tolerances.

Check these GUARDIAN features and see the difference!

- Made of extruded brass bar stock.
- Outlet joined to body by a silver soldering process guaranteeing perfect connection.
- Metal-to-metal seating insures perfect closing, eliminates usual deterioration, assures longer life.
- Precision tapered seat in body and radius on stem prevents parts from locking . . . gives smoother valve operation.
- Adjustable packing nut with special J-M graphite-asbestos packing especially designed for oil.

Complete specification data now available. Write for Bulletin V-101.

Ask about Guardian Flexible Couplings. Over 4 million in use.

To be sure you get Guardian quality look for the name Guardian stamped on the body of the valve. All Guardian valves are GUARANTEED valves.

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VALVE DIVISION
DEPT. F-21, 1215 EAST SECOND STREET
Michigan City, Indiana

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An Acme Electric transformer equipped oil burner, is visual assurance of dependable ignition performance. Heavy duty design, impregnated coils, sealed in heat dissipating compound.

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TRANSFORMERS

ANNOUNCING

A NEW, LOW PRICED *Skinner* drip-eliminator or shut-off *Valve*

for better oil burner service!

Model V2-100

You can't beat the NEW V2-100 Solenoid Valve for dependability on original burner equipment or for service satisfaction. This very compact valve has such quality features as sturdy steel construction with all parts plated to resist corrosion — soft synthetic seat and seals to prevent leakage — spring loading for positive closing — *no* brazed, welded or soldered pressure *joints* — usable in any position — weight, only 9 oz. Maximum pressure is 125 p.s.i. The NEW V2-100 is two-way, normally closed, rated at 10 watts maximum and is Underwriters' approved.

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A factual bulletin No. 1186-F shows how you can profit by the correct use of a Dehydrator. Let us have your fuel oil cleaning problem. Write to Erie Meter Systems, Inc., Erie, Pa.

Be first in your market to offer absolutely clean and crystal clear fuel oil. Remove the solids and all free water from your fuel oil to protect your customers' oil burners. Add this service to make your product better. The Erie Dehydrator developed at first for aviation fuels is now applied in scores of ways to remove sludge, dirt and water from petroleum liquids.

ERIE

ERIE METER SYSTEMS, INC.

MAIN OFFICE AND PLANT, ERIE, PA., U. S. A.

depend on weak or brittle metal to hold an inserted plug.

Made by: Natco Pressure Patch Corp., 4800 E. Wabash Ave., Baltimore 15, Md.

Comfortaire is Humidifier-air Valve

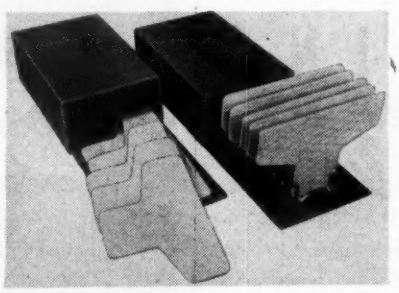
COMFORTAIRE humidifier-air valve is for use only on steam radiators to provide humidification automatically, evaporating up to 1 gal. of water per day. The Comfortaire replaces the ordinary steam radiator air valve and utilizes moisture from within the radiator so that filling or attention is not required.

Steam enters a small inner tube from the radiator, goes to a manifold where it moves upward through copper-wool and brass screens. Here the steam is diffused and broken up to a quiet stream, which is discharged through a small orifice in the outlet. A float rises and lifts a ball to close the discharge outlet if it become necessary to care for excess condensate.

Made by: Comfortaire Co., 220 West 42nd St., New York 18, N. Y.

Viking adds Kits for Humidifier plate Replacements

NEW KITS FOR HUMIDIFIER PLATE replacements have been announced by Viking Air Conditioning Corp. Avail-



able in two styles, No. 5073 with racks and No. 5028, without racks, the former is intended for addition to humidifiers where an increase in humidification is desired, the latter is for use in straight plate replacement.

The Viking plates are made of compressed glass wool, packed five to the box and are of a size that makes it possible to use them in most plate-type humidifiers. The company recommends that humidifier plates be replaced annually, preferably at the beginning of each heating season.

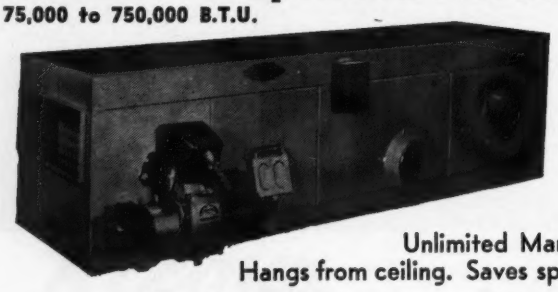
Made by: Viking Air Conditioning Corp., 5600 Walworth Ave., Cleveland 2, Ohio.

Symplytrol Controls many Processes and Operations

SYMPLYTROL AUTOMATIC CONTROLLER is used to control a number of processes and operations, including protecting motors from low line voltage or overload and to light signal lamps or ring alarms in controlled processes. Available in all ranges of voltage and current, the device consists of a contact

ARTCRAFT Suspended Furnace

75,000 to 750,000 B.T.U.



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Turn Your DEFECTIVE PARTS into CA$H

We will pay you $3.00 each for the following STACK RELAYS

MINN.-HONEYWELL	MERCOID	PERFEX	PENN	
RA116	JMI	5200	670	DELCO-COA
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We will pay you $2.00 each for the following FUEL UNITS
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We will pay you $1.00 each for the following OIL BURNER IGNITION TRANSFORMERS
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(*Based upon comparative results—ASHVE standards.)

The famous Edgeseal, the original *Hair* Filter with the patented self-sealing edge.

The popular Honeycomb, the dressed up *Hair* Filter that is so easy to handle.

*1. **Greater dust-catching efficiency:** Hair, which Nature, in its infinite wisdom, placed in the nostrils of all humans, possesses an inherent ability to catch dust, dirt, lint and pollen. The surface of hair is barbed and fuzzy, with millions of tiny feelers extended to trap foreign particles.

2. **Maximum air-flow efficiency:** Hair is fine-textured, light in weight and airy. It permits a free-and-easy flow of air with minimum resistance. There are no layers. A Wilson *hair* filter pad requires no *artificial* channels for air passage.

3. **Maximum dust-holding efficiency:** In a Wilson *hair* filter pad, the hair is crossed and crisscrossed, in and out, up and down, back and forth every which way. This arrangement invites all dust and dirt to come in, spread around, and be trapped throughout the entire filter interior. This provides *full-depth* dust trapping . . . cleaning without clogging.

Save delay. Save dollars. Save doubt. Send for FREE sample with details and prices.

WILSON & CO., INC.
(Air Filter Division), 4100 South Ashland Ave., Chicago 9, Ill.

Wilson Hair Filters are another quality product of Wilson & Co., Inc., world-famous for meat products, sports equipment, pharmaceuticals, hair products, etc.

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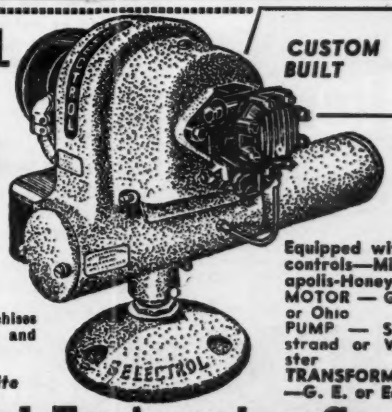

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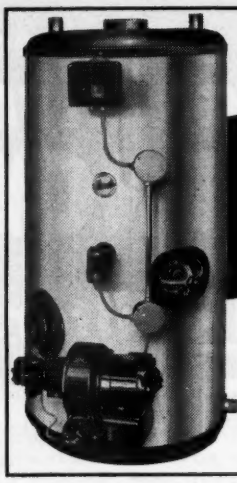

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meter-relay with built-in Micro-contacts and load relay rated at 15 amperes, 115 volts, 7½ amperes, 230 volt load, and an interrupter relay. All relays have snap action switches and an isolating power transformer with 110 and 220 volt connections, rectifier and filter system to supply power for the relays.

Symplytrols may be supplied on order with higher ampere load and other special features.

Made by: Assembly Products, Inc., Chagrin Falls, Ohio.

Heat-Flow Meter measures Over-All heat Transfer

ANNOUNCED is the Heat-Flow Meter, designed to measure the over-all relative heat transfer due to the combined effects of radiation, convection and conduction. It is applicable in processes involving steam generators, heat exchangers, furnaces, kilns and other industrial heating operations. The meter can be kept in continuous use and consists essentially of two concentric lengths of stainless steel tubing that can be furnished in various lengths. It is portable and requires no special skill.

The meter adapts the principle of the water-cooled calorimeter in that a constant flow of water circulates through it. Thermocouples located in the tip give voltage readings that are proportional to the rise in temperature of the water passing through the tip and readings are transferred to an attached potention-meter, calibrated to the thermocouple material.

Made by: Thermal Research & Eng. Corp., 73 Pond St., Waltham, Mass.

with

DWYER TRANSPARENT SMOKE GAGE

KNOW what your burner or furnace is doing—BE SURE you are getting the maximum amount of CO_2 with clean combustion. The DWYER Smoke Gage gives you an actual sample of smoke for comparison with the DWYER Smoke Chart. For greater fuel saving efficiency with soot-free burning, it's the DWYER Smoke Gage . . . . precision-made, accurate, inexpensive!

HOW TO USE IT: With Smoke Gage terminal tube in smoke pipe opening, force smoke sample through paper in Gage holder with aspirator bulb. Remove paper and compare with Chart. It's that easy!

DWYER No. 910 Smoke Gage . . $8.50 Complete

(DWYER 910-S Smoke Gage, for use with DWYER Combustion Test Set, no duplication of parts . . . . $4.50)

Write for literature describing the complete line of DWYER Test Instruments—Manometers, Draft Gages, etc.

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CHANDLER COMPANY

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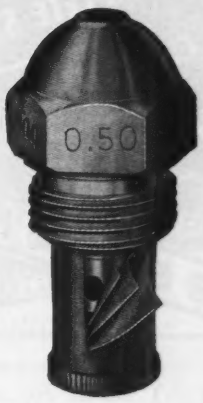
TROUBLE WITH YOUR LITTLE ONES?

When it comes to filtering oil for small capacity nozzles the Hago 3-stage strainer is the answer!

The oil is filtered through one layer of 150 mesh and two layers of 200 mesh monel wire cloth, to insure removal of the smallest particles of foreign matter.

They're all metal and can be cleaned!



Hago Products - 1281 Springfield Ave., Irvington 11, N. J.

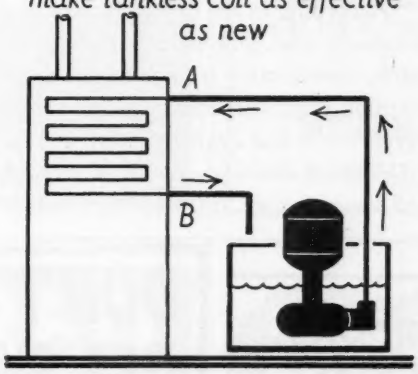
Everyday Snags

Cleaning Tankless Coil

Making tankless water heater coils as effective as new, after hard water deposits have reduced their outputs to a trickle, is the specialty business of a burner dealer located in Pennsylvania. Using the equipment shown in the diagram, he circulates through the old coils a chemical that removes lime entirely within about half an hour. He obtains the chemical from a company specializing in boiler water treatment chemicals, and believes any large chemical supply house can supply similar, suitable chemicals.

The sump pump in the diagram stands in part of a 55-gallon oil drum. Cutting the drum provides this basin, which is about 18" high. One rubber hose connects the output of the sump pump to the coil at "A." Another hose

Chemicals and sump pump make tankless coil as effective as new



leads the chemical from coil connection "B" back to the basin in which the pump stands. After about 15-minutes of pumping in the direction shown in the drawing, the dealer changes the hoses so that the chemical enters at "B" and leaves the coil at "A." The piping of certain old installations is changed by the dealer the first time he rejuvenates a coil, so that he can apply his hoses speedily when in the future coil treatment is needed again.

* * *

How Much Draft-Drop

The article, "Design Slants on Oil-Fired Units, in the September issue of FO&OH, stressed that draft-drop or pressure difference through the flues must be within reason, for an oil-boiler or oil-furnace to be of balanced design. The fact that the article emphasized this point, seldom even mentioned in textbooks or magazine articles, caused the engineers employed by one manufacturer of oilheating equipment to discuss the point in detail.

Draft-drop is not always well understood, even by experts employed by manufacturers, one of the engineers who discussed the point explained. As evidence of this, he showed the conversion burner manual recently issued by one manufacturer, which tells deal-

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HAS A NEW NAME

CLEAN RIGHT
SOOT REMOVER

It's still the same fine product that you can depend on for customer and service satisfaction

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"LOOK FOR THE BROOM ON THE PACKAGE"

REIF-REXOIL, Inc. 37 Carroll St., Buffalo, N. Y.
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ers to (a) adjust for .02" over-fire draft, and at the same time (b) obtain a smokepipe draft reading of .04".

"How in the world can a service man obtain the readings of .02" over-fire draft, and .04" smokepipe draft," the critic asked, "unless the furnace or boiler just happens to have a draft drop of .02" at the particular gph rate and CO_2 setting being used?"

The engineers discussing draft-drop in detail concluded that certainly no general field trouble comes of designing for a draft-drop through the flues of .02", but that upping this to .04" invites trouble. This applies to smallest oil-fired units, fired at from .65 gph to 1.25 gph. It applies to clean flues, firing the units at the maximum gph for which they are rated, and an air-oil ratio corresponding to 10% CO_2.

According to the experiences of one engineer who took part in the discussion, considerable trouble came of designing small furnaces, fired .85 to 1.0 gph, for a flue draft-drop of .05" on the basis outlined above. The chimneys of the one-story and two-story homes heated by these furnaces provided only .06" to .08" draft in most cases, according to this engineer. And when sooted, the furnaces showed draft-drops of .06" to .10", resulting in many instances of trouble caused by plus over-fire pressure, for which the particular furnaces were not intended.

* * *

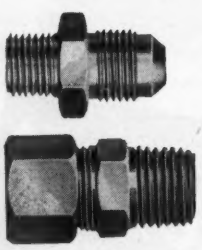
Rain Water and Soot

Usually this trouble is considered rare and unimportant in the life of a service man, but still one man recently

DUE TO PRESENT CONDITIONS ONLY D.O. RATED BUSINESS CAN BE CONSIDERED.

We pledge to our customers that all our efforts will be devoted to fulfill their present and future requirements to the best of our ability.

Standard & Special Types of



Flare Fittings

Brass Nipples

Compression Fittings

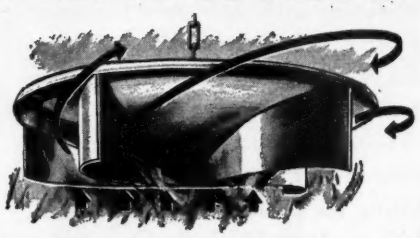
JOBBERS
MANUFACTURERS—
Write today for illustrated Catalog and Price List No. RDO

RELIANCE TUBULAR PRODUCTS CO.
"Manufacturers and Fabricators of Aluminum and Copper Specialties and Brass Fittings"
9112 ST. CLAIR AVE. CLEVELAND 8, OHIO

DON'T JUST BAFFLE! GET SWIRLING ACTION TOO-

It pays to include a FIRE-SWIRL with every conversion.

Get the facts, clip this to your letter head.



FIRE-SWIRL ZEH COMPANY INC., PASSAIC, N.J.

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Since 1916 the Industry's outstanding product for repairing leaks in high and low pressure steam boilers and hot water heating systems. "X" is a colloid, contains no harmful solids. Its repair is lasting and certain because it is made from the outside in, through the metal line of the boiler and will not break down due to expansion or contraction.

"X" LABORATORIES, INC., 25 WEST 45TH ST., NEW YORK 19, N. Y.

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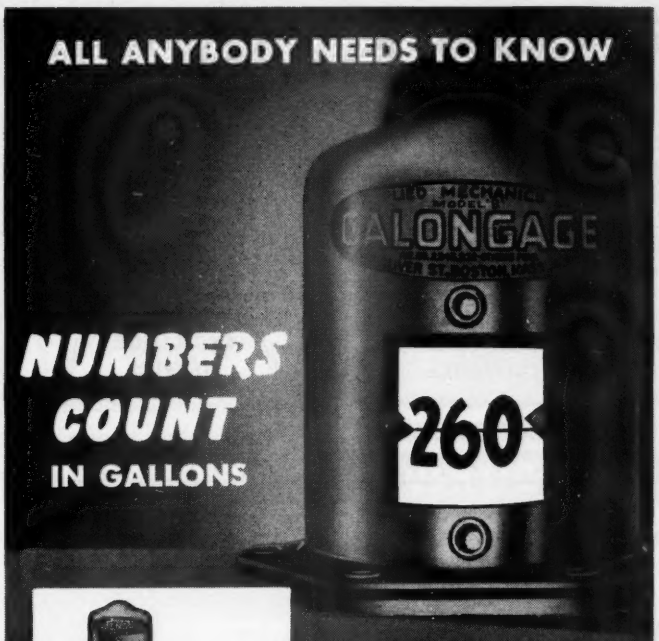

NUMBERS COUNT IN GALLONS

APPLIED MECHANICS COMPANY
167 OLIVER STREET, BOSTON 10, MASSACHUSETTS

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CONVERT ANY ROOM THERMOSTAT

into a fully automatic day-night thermostat in 5 minutes. No tools required—no disturbing of wiring—Anyone can do it—at an unheard of low cost! You just can't believe it until you see the Robot!!!

A REAL PROFIT MAKER for dealer and salesmen. The ROBOT sells on sight—over the counter or in canvassing down the street. It makes salesmen WANT to ring door bells—and make big money!

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836 N. FOURTH ST. MILWAUKEE, WIS.

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DRAFT-A-JUSTORS

Cut Fuel Consumption by
10% TO 30%

The *Preferred* Draft-A-Justor is the original, patented Draft-A-Justor . . . improved to include the latest in engineering developments.

Stainless steel bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES
Stock, domestic and commercial sizes from 4" to 24" in diameter.
Industrial sizes from 2' x 2' to 5' x 12'.

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to be SEEN . . . . but not HEARD!

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LOVEJOY
L-R FLEXIBLE COUPLINGS

They are designed to correct misalignment with maximum absorption of shock, vibration, torque and overload . . . without noise. The rubber center unit increases flexibility and absorbs vibration. These tight fitting couplings are easy to install in close, dark quarters.

SEND FOR BULLETIN 514 and COMPLETE INFORMATION

OHI

★ A point to remember . . .
Most fan manufacturers supply blowers with L-R jaws on blower hubs at slight extra cost.

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Mfrs. of Lovejoy Flexible Couplings for all industrial services. Lovejoy Variable Speed Transmission and Lovejoy Universal Joints.

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FUEL UNITS	TUBING
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CRESCENT PARTS AND EQUIPMENT CO., INC.

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STOKER & OIL BURNER M-H, PERFEX PENN

was bothered for months because of rain entering the top of a chimney.

Heated by a handsome furnace-burner unit, this new home had a fixed-up basement as glistening and attractive as most kitchens. The walls were knotty pine, the ceilings white enamelled, and the furniture sparkled with red leather and chromium plating.

"It would be on this job," sighs the dealer who installed the furnace, "that black liquid kept dripping out of the smokepipe, which was ten feet long and high up, and dripped all over the place spotting up the furniture and ballroom floor."

Condensation of flue gases in the chimney, caused by low stack temperature, was at first thought to be the trouble. A check-up showed the smokepipe temperature to be 465°. Jacking up the firing rate to obtain 600° stack temperature helped the trouble last March, the dealer thought.

Came summer, however, and with the burner idle for two months the smokepipe still dripped black stuff, plenty of it. Fitting the top of the chimney with a top of special design cured the trouble near the end of the summer, and proved definitely that the trouble had been caused by rain entering the top of the chimney. The dealer has gone back to the original gph rate and to 465° stack.

Literature and data on ending chimney trouble of this type and other types can be obtained from the Wigwam Flue Top Company, Abington, Mass., and should be in the hands of every serviceman who has questions about the types of chimney tops.

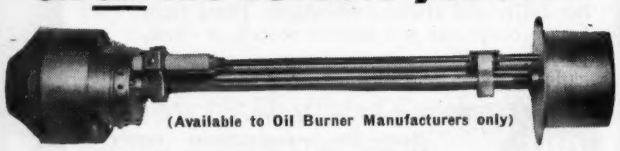
HARSCH

Highest Quality joined with Accuracy and Workmanship— Responsibility gives you great Satisfaction and fullest Confidence toward our **HARSCH** *Nozzles!*

H. HARSCH & CO., INC.

230 Tuscan Road, Maplewood, N. J.

Dealers! Jobbers! Insist on Shell Designed Combustion Heads on all the burners you sell!



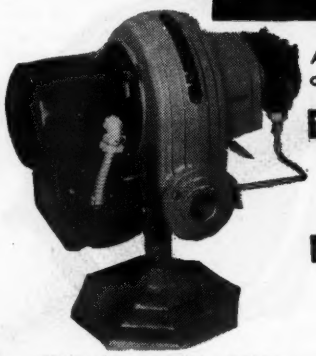
(Available to Oil Burner Manufacturers only)

The Shell Head's proven fuel-saving feature gives you a powerful selling advantage over competition with ordinary equipment. Sell the best!

MODERN DIE & MACHINE CO.

166 Pleasant St. Boston 25, Mass.

important OIL BURNER FACTS ABOUT Radiant THE SERVICEMAN'S BURNER



A nation-wide survey conducted by our advertising agency showed that

1. RADIANT burner performance is equal to the highest price burner. Yet they are priced to meet the lowest competition, even on project work.
2. Heavy sales are due to
   —low cost of upkeep
   —ease of installation and servicing
   —factory guarantee
   —national distribution in protected territories

Write for complete details

New model equipped with Shell designed combustion head

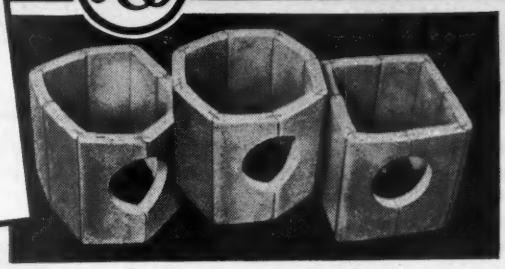
RADIANT UTILITIES CORP.

8817 18th AVE., BROOKLYN 14, N. Y.

CHOOSE YOUR SHAPE for Any Style Furnace or Burner

from ONE Complete – Convenient Carton

R&I COMBUSTION CHAMBER



- Easy to Handle and Install
- Fast Heating • Quiet • Efficient
- Gives Up Stored Heat Gradually
- One Safe Package Has Everything for Any Shape Chamber

Many thousands of these better quality, longer lasting R & I Refractory Chambers are giving real customer satisfaction. Your supply house has them. Try them—and save on installation costs.

Write for Free Copy of "Better Combustion Chambers"

REFRACTORY & INSULATION CORP. • 116 Wall Street • New York 5, N. Y.

Design economy into your burners

Standard & High Pressure SEPARATORS

Maintenance and replacements costs are 2 important items to oil burner purchasers. With Kraissl separators, you can design faster, easier maintenance into your burner—and eliminate filter replacement costs entirely. Installation on the exterior of your burner gives instant, easy access—without dismantling. And the cleaning of the removable filter baskets restores original efficiency—thus eliminating the normally expensive replacement costs. Complete range of sizes—from 1¼" to 6"; pressures to 500 psi; practically any degree of separation.

Ask for Bulletin A-1214.

If you have any special problems —or need more information, please write us fully. You will receive a prompt and detailed reply.

KRAISSL CO. Inc.
295 WILLIAMS AVE., HACKENSACK, N. J.

Oilheating Trends

(*Begins on page 12*)

jobs. The indicated total of such jobs not completed for lack of material on January 1 was a little under 1200. In other words, if every dealer had everything he needed the total December installations would have been that much higher. The figure is relatively insignificant. Among the dealers who lacked material to complete a job the principal items mentioned were boilers and furnaces.

Dealers seemed quite well stocked with copper tubing, for example. They were asked how their individual stocks of this material would relate to number of future installations. Based on their experience the indicated total for the country would be about 122,000 installations that can be made without dealers having to get additional copper tubing. This is a significant figure in the light of copper restrictions that became effective with the new year.

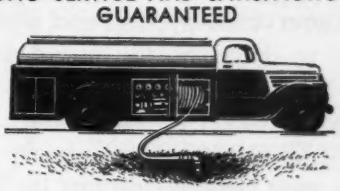
FUELOIL PRICES: Nine out of ten among reporting fueloil distributors say that the "voluntary" price freeze of December 18 will not hurt them seriously. In other words, this 90% expects a fairly profitable year in 1951 on present margins. By sections of the country the per cent of reporting companies expecting fair profits at present prices are New England 88%, Mid-Atlantic 93%, and the Midwest 82%. The coverage on this question from other sections of the country was not broad enough to be representative.

FUELOIL STOCKS: Distillate fueloils at refineries, terminals, and in transit on January 6th were 55,731,000 barrels for the area East of the Rockies. This compares with 60,828,000 barrels on

REPLACE YOUR WORN HOSE NOW WITH NEW

CARLYLE FUEL OIL HOSE

LONG SERVICE AND SATISFACTION GUARANTEED



Stock No. OFH-44

Constructed for the conveying of fuel oil, kerosene and solvents from trucks to industrial plants, buildings, institutions and individual homes.

Check These Advantages

- OIL AND AROMATIC GAS RESISTANT SMOOTH TUBE PROVIDES FULL-FLOW.
- LIGHTWEIGHT, EASY-TO-HANDLE.
- STATIC DISSIPATING WIRE INCORPORATED IN CARCASS.
- PLIABLE, REELS OR RACKS EASILY.

Lengths Available	INSIDE DIAMETER SIZE ¾"	1"	1¼"	1½"
25 ft. ..	$15.10	$18.25	$24.75	$30.50
50 ft. ..	28.60	34.50	47.00	57.75
75 ft. ..	42.10	50.75	69.25	85.00
100 ft. ..	55.60	67.00	91.50	112.25
125 ft. ..	69.10	83.25	113.75	139.50

Prices shown above include Scovill type Male and Female Iron Pipe Thread Couplings Attached.

LIMITED OFFER

SOLID BRASS NOZZLES for FUEL OIL & GASOLINE DELIVERY SERVICE

EXTREMELY LOW PRICED—$10.00

1¼" "Wheaton" #150, Fuel Oil & Gasoline Delivery Nozzles with Five Special Features—

1. Solid Brass Construction.
2. 15" Flexible Spout x 1" Opening.
3. Dual valves assure smooth even flow.
4. Bushing furnished to alter to 1" or 1½" lines, if desired.
5. Graduated notches in the rear guard hold the lever open at any speed desired.

TERMS: 2% 10 Days to rated firms, otherwise C.O.D.

ALL PRICES SHOWN INCLUDE DELIVERY TO DESTINATION

CARLYLE RUBBER COMPANY, Inc.

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Phone: Digby 9-3810

ONLY McCORKLE CONTROLS
for Vaporizing Oil Burners

give you this combination of vital features

- Patented dual blade bi-metal assembly—insures trouble-free operation—supplies a wide margin of *extra* power.
- More rapid heat transmission.
- Snap acting Micro-switch.
- Heavier, more rugged construction.
- Less service—greater customer satisfaction.

We will gladly furnish literature and specifications for your particular requirements. Write us today!

D. H. McCORKLE CO.
Box E, Station A Berkeley, California

the corresponding date last year. Local stocks of fueloil distributors are believed to be a little higher than last year since they had been checked in September and November and found to be up. However, the oil industry still has a major problem to move enough product to the consuming levels. There is plenty of capacity at every stage but it is time that the industry was seeing more direct action. It would not make a very happy story to say that stocks were allowed to fall too low because the December price freeze found distillate fueloil less profitable than gasoline to the refinery. This is particularly true in the light of overall industry profits.

DEALER COMMENTS: Typical comments on questions of the month are these: . . . "Our present margin on No. 2 is 2.2¢ a gallon compared to 3.0¢ a year ago; it is not enough" . . . "About the only sales we lose are the ones that competition takes at about our cost, apparently for experience" . . . "We'll have less sales in 1951 but also less competition, better margins and less price cutting" . . . "Damn the Rooshunz" . . . "The Midwest buys fueloil on the low the Chicago Journal of Commerce quotes. Just before the price freeze the Journal quotations advanced ¼ cent with no advance in retail prices. This squeezes us out of ¼ cent profit; does it make sense?" . . . "1951 looks good if we can get material; our reserve is good at present" . . . "Oil companies in our town are not taking new accounts" . . . "Don't expect many installations from now to March; then it will start again.

8 WAYS BETTER

THERMO DRIP Automatic HUMIDIFIER

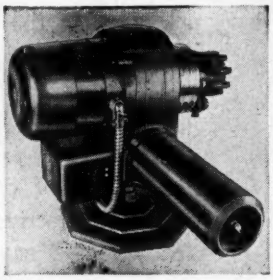
1 Water drops in pan after it is sizzling hot.
2 No stagnant pool to reheat.
3 Each drop of water vaporizes quickly as it hits pan.
4 1 kit to purchase.
5 12 pan sizes.
6 Super sensitive thermostat.
7 Outside screw adjuster.
8 Easy installation.

FO-21

Vaporizing pans rest directly on combustion dome. Can be suspended in plenum chamber. Simplicity of construction insures long life—easy servicing. There is no electrolytic action—no clogging of valve. Write TODAY for FREE literature.

AUTOMATIC HUMIDIFIER CO., CEDAR FALLS, IOWA

SINCE 1927
STANDARD AUTOMATIC OIL BURNERS



Equipped with ECONOMY HUB which delivers additional air after motor stops. Eliminates carbon formation.

Models from ¾ gal. to 20 gal. per hr.

STANDARD ARCOIL CORP.
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SOOT-GO SOOT DESTROYER

STILL THE BEST for cleaning oil and gas-fired heating plants.
EFFICIENT AND ECONOMICAL TO USE

ALSO:
SLUDGE-GO for Cleaning Fuel Oil Tanks and Will Emulsify Water.
EZ-E WELD for Sealing Leaky Boilers. No After Odor. No Draining.

Write for name of nearest jobber
KALMIDE CHEMICAL CO., INC.
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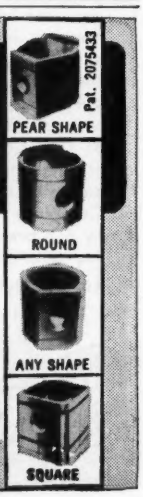
LITE·CAST
COMBUSTION CHAMBERS
QUICK HEAT LONG LIFE



Close to ½ million installations are testimony to the sales making features of
MONOGRAM COMBUSTION CHAMBERS
All shapes and sizes.
Our literature will assist you in your work.
Write for it today

MONOGRAM PRODUCTS CO., INC.
731 NORTH 35th STREET, PHILADELPHIA 4, PA.

RAYFIELD AUTOMATIC

RAYFIELD BURNERS FOR No. 4 or No. 5 HEAVY OILS

MODEL JR.
1.00 to 5.00 GALS./HR.
MODEL D4
3.00 to 12.00 GALS./HR.

1. Fully Automatic
2. Self Cleaning Nozzle
3. Self Lubricating
4. All Electric Operation
5. Pays for itself from savings
6. Burns the cheaper No. 5 oil

HEAT RECLAIMERS

1. Low in Price—Automatic—Easy Installation
2. Installs on Boilers, Furnaces or Stoves
3. For use with Coal, Gas, Oil or Wood
4. Increases output of ANY gravity warm air furnace
5. Heats Basements, Play Rooms, Garages, etc.
6. The hotter the stack—the more heat reclaimed
7. Saves wasted heat now going up the chimney

PATENTED COMBUSTION HEAD OIL BURNERS

for CATALYTIC OILS TO #3 GRADE
2 MODELS
1.00 to 3.00 GALS./HR. CAPACITY

1. Amazing Economy 12 to 15% CO_2
2. Clean boilers with perfected combustion
3. Burns Catalytic oils easily
4. Quiet—No Vibration or pulsation
5. Cuts user's oil bills 14 to 36%
6. The ideal replacement oil burner

C. L. RAYFIELD COMPANY • 2010-18 SO. HALSTED ST. • CHICAGO 8, ILL.

AUTOMATIC EVEN HEAT DISTRIBUTION
WITH GORTON VALVES

For Fast Venting

Every radiator is made to automatically heat EVENLY and QUICKLY—WITH OUNCES of VAPOR INSTEAD OF POUNDS OF PRESSURE.

Write today for Literature and sizing plate

GORTON HEATING CORP.

Since 1887—Manufacturers of Heating Equipment

CRANFORD, NEW JERSEY

Less TARE — Longer WARE
MILOS
FUELOIL ADDITIVE

WHAT IT DOES:

- Helps remove soot.
- Increases B.T.U.'s.
- Helps dissolve and remove gum deposits, sludge and water.
- Helps overcome oil odors.
- Retards rust and corrosion.

Write for prices and dealer discounts!

MILOS SYSTEM DEVICES
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Sure, you'd like to eliminate downdraft problems!

You're bound to run into trouble now and then with jobs that cause too much soot, and waste heat because of tricky downdraft. THERMCAP will help you eliminate downdraft trouble completely—it controls draft at the top of the chimney, and keeps flues dry and soot-free. Try THERMCAP on your most troublesome job—you'll see immediate combustion improvement, and a definite saving in fuel. Satisfaction is guaranteed! Write for profitable dealer offer and literature.

WIGWAM FLUE TOP CO., Abington, Mass.

SALES, $1,210,000.00
WORKING CAPITAL, $110,000.00

One of our customers recently convinced a very important credit manager that it was only our loans that made possible a Million-and-a-Quarter-Dollar Business on a working capital of a little over One Hundred Thousand Dollars.

If this interests you, write for particulars.

LEXINGTON CORPORATION
M. S. Lurio, Pres.
Fuel Financing from Maine to Maryland
10 Milk Street Liberty 2-6878 Boston, Mass.
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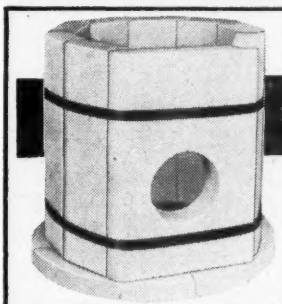
FOR SATISFIED CUSTOMERS — INSTALL . . .

AMERICAN COMBUSTION CHAMBERS
100% "KILN-CURED" LIGHTWEIGHT REFRACTORIES



Equipment manufacturers are invited to bring their special design problems to us.

HIGH QUALITY
American Chambers are made from the finest, high grade refractory materials combined with proper "Kiln-curing". They will withstand 2500 degree temperatures and will not crumble in water.

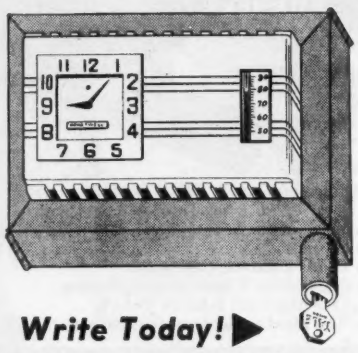
EASY INSTALLATION
Controlled manufacturing and careful design of American Chambers makes for fast and easy installation. The flexible pieces fit together with a minimum of effort.

TOP PERFORMANCE
Because of the high quality of materials used in American Chambers they provide faster heat-ups, quieter burner operation and savings in fuel.

JOBBERS: Write today for price sheet.

AMERICAN CLAY FORMING CO.
TIFFIN, OHIO

It's Here! *The New* THERMOLOK

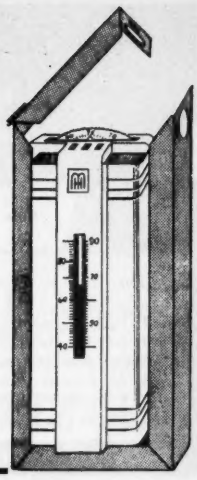


Guards Thermostat Settings

EASY TO INSTALL

- **15 seconds to install.**
- **No heat lock.**
- **No holes in wall.**
- **No nails or screws.**

Additional Models available to fit other makes and sizes. WRITE FOR LITERATURE.



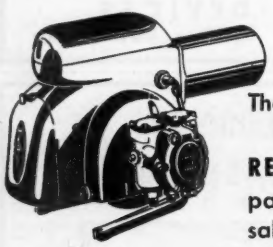
Write Today! ▶

THERMOLOK MFG. COMPANY

541 ROGERS AVE., BROOKLYN 25, N. Y.

HERCO
Profits Last Longer

. . . because when you sell HERCO, you are selling years of trouble-free performance. This means that your profits are protected from expensive service calls and bothersome complaints.



The *Handsome* **HERCO RESIDENTIAL** packs *plenty* of sales appeal...

. . . Here's a burner that will give your customers everything they could ask for in a fine oil burner . . . beauty, quiet operation, "built-in" efficiency. Unusual economy is made possible by the Thriftifier—an exclusive HERCO invention that provides a hotter, thriftier fire—saves oil. Built in three different sizes to fit *every* housing requirement.

Ask about the

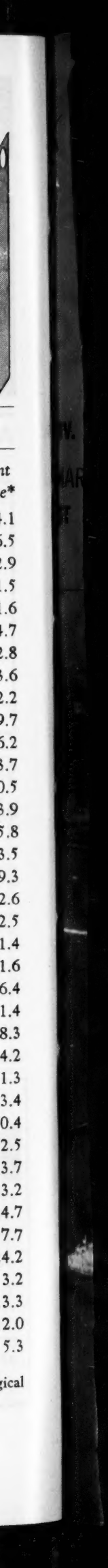
HERCO STAINLESS STEEL OIL HEAT UNIT

For genuine value, you just can't beat it. This warm air unit has a sturdy, double-walled stainless steel combustion chamber that gives perfect heat delivery. Its exclusive "heat economizer" actually *pre-heats* cold incoming air—a feature that spells savings to the customer. Write for details.

HERCO OIL BURNER CORP., LANCASTER, PA.

HERCO
The Oil-Thrifty
OIL BURNER

DEGREE DAY TABLES

ONE MONTH ONLY						SEASON TO DATE			
	December		*Percent*			*(Sept. 1 to Dec. 31)*			*Percent*
Normal	*1949*	*1950*	*Change**			*Normal*	*1949*	*1950*	*Change**
1139	1009	1218	+ 6.9		Albany	2421	2397	2520	+ 4.1
640	592	773	+ 20.8		Atlanta	1175	1073	1369	+ 16.5
852	728	894	+ 4.9		Baltimore	1647	1368	1599	— 2.9
1000	872	904	— 9.6		Boston	2087	1851	1846	— 11.5
1102	983	1168	+ 6.0		Buffalo	2384	2273	2424	+ 1.6
1108	962	1271	+ 14.7		Chicago	2235	2109	2341	+ 4.7
953	743	1053	+ 10.5		Cincinnati	1892	1511	1945	+ 2.8
1040	883	1160	+ 11.5		Cleveland	2174	1918	2252	+ 3.6
571	459	571	..		Dallas	944	779	923	— 2.2
1012	923	819	— 19.1		Denver	2272	1875	1824	— 19.7
1200	1118	1387	+ 15.6		Des Moines	2424	2230	2574	+ 6.2
1120	993	1218	+ 8.7		Detroit	2369	2227	2457	+ 3.7
1129	994	1222	+ 8.2		Grand Rapids	2456	2260	2470	+ 0.5
1052	1020	1024	— 2.6		Hartford	2217	2137	2129	— 3.9
1245	1395	1187	— 4.6		Helena	3074	3241	3252	+ 5.8
331	239	279	— 15.7		Houston	520	392	450	— 13.5
1026	840	1210	+ 18.0		Indianapolis	2053	1785	2244	+ 9.3
986	866	1056	+ 7.1		Kansas City	1877	1599	1926	+ 2.6
225	294	114	— 49.3		Los Angeles	383	414	220	— 42.5
875	726	1026	+ 17.2		Louisville	1677	1503	1868	+ 11.4
1198	1142	1437	+ 19.9		Milwaukee	2515	2456	2807	+ 11.6
1415	1384	1627	+ 15.0		Minneapolis	3005	2807	3198	+ 6.4
305	223	358	+ 17.4		New Orleans	475	575	577	+ 21.4
934	767	924	— 1.1		New York	1859	1495	1704	— 8.3
1163	1088	1252	+ 7.6		Omaha	2310	2236	2407	+ 4.2
884	753	916	+ 3.6		Philadelphia	1699	1458	1676	— 1.3
979	841	1084	+ 10.7		Pittsburgh	2028	1774	2097	+ 3.4
1172	1012	1096	— 6.5		Portland, Me.	2602	2532	2591	— 0.4
729	694	516	— 29.2		Portland, Ore.	1676	1554	1467	— 12.5
1015	867	915	— 9.8		Providence	2157	1852	1862	— 13.7
803	764	939	+ 16.9		Roanoke	1612	1533	1825	+ 13.2
917	741	1087	+ 18.5		St. Louis	1729	1466	1983	+ 14.7
1040	1002	894	— 14.0		Salt Lake City	2224	2049	1829	— 17.7
426	448	345	— 19.0		San Francisco	930	933	705	— 24.2
1373	1329	1435	+ 4.5		Sault Ste. Marie	3233	3241	3338	+ 3.2
708	722	520	— 26.5		Seattle	1812	1723	1571	— 13.3
1090	987	1293	+ 18.6		Toledo	2278	2208	2551	+ 12.0
870	718	907	+ 4.2		Washington	1725	1391	1633	— 5.3

*Compared with normal. Note: Above figures secured from Monthly Meteorological Summaries published by U. S. Weather Bureau offices in individual cities.